ECONOMICA

NEW SERIES
Volume VI
Numbers 21—24
(1939)

REPRINTED 1964 FOR
Wm. DAWSON & SONS Ltd., LONDON
WITH THE PERMISSION OF
THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE
PRINTED IN BELGIUM

INDEX TO *ECONOMICA*

NEW SERIES, VOLUME VI, 1939 (NUMBERS 21-24)

AUTHORS

Allen (R. G. D.) The Assumptions of Linear Regression. p. 191.
Bernardelli (H.) A Reply to Mr. Samuelson's Note on "The End of Marginal Utility." p. 88.
Booker (H. S.) A Survey of Milk Distribution. p. 78.
Coase (R. H.) Rowland Hill and the Penny Post. p. 423.
Edwards (R. S.) A Note on the Law Relating to Company Dividends. p. 170.
Foa (B. G.) and Treves (P. G.) Italian Finance and Investment. p. 270.
Fowler (R. F.). *See* Plant, Arnold.
Fraser (L. M.) The Equation of Exchange: A Suggestion. p. 67.
Horsefield (J. K.) Currency Devaluation and Public Finance, 1929–1937. p. 322.
Kaldor (Nicholas) Capital Intensity and the Trade Cycle. p. 40.
Knight (F. H.) Ethics and Economic Reform: I. The Ethics of Liberalism. p. 1. II. Idealism and Marxism. p. 296. III. Christianity. p. 398.
Lerner (A. P.) *Ex-Ante* Analysis and Wage Theory. p. 436.
Lutz (F. A.) Velocity Analysis and the Theory of the Creation of Deposits. p. 156.
Machlup (F.) The Theory of Foreign Exchanges. Part I. p. 375.
Marget (A. W.) The "Rate of Sale" and the "Velocity of Circulation of Goods." A Comment. p. 450.
Paish (F. W.) A Note on Bank Window-Dressing. p. 456.
Paish (F. W.) Twenty Years of the Floating Debt. p. 243.
Plant (Arnold) "An African Survey." p. 205.
Plant (Arnold) and Fowler (R. F.) The Analysis of Costs of Retail Distribution. p. 121.
Samuelson (Paul A.) The End of Marginal Utility: A Note on Dr. Bernardelli's Article. p. 86.
Schultz (Henry) Comments on "The Assumptions of Linear Regression." p. 202.
Tress (R. C.) A Note on the Diagrammatic Representation of Elasticity of Supply. p. 345.
Treves (P. G.). *See* Foa (B. G.).
Whale (P. Barrett) International Short-term Capital Movements. p. 30.

LIST OF TITLES

"An African Survey"; by Arnold Plant. p. 205.
The Analysis of Costs of Retail Distribution; by Arnold Plant and R. F. Fowler. p. 121.
The Assumptions of Linear Regression; by R. G. D. Allen. p. 191.
—— Comments; by Henry Schultz. p. 202.
Capital Intensity and the Trade Cycle; by Nicholas Kaldor. p. 40.
Currency Devaluation and Public Finance, 1929–1937; by J. K. Horsefield. p. 322.
The End of Marginal Utility: A Note on Dr. Bernardelli's Article; by Paul A. Samuelson. p. 86.
—— A Reply to Mr. Samuelson's Note; by H. Bernardelli. p. 88.
The Equation of Exchange: A Suggestion; by L. M. Fraser. p. 67.
Ethics and Economic Reform; by F. H. Knight. I. The Ethics of Liberalism. p. 1. II. Idealism and Marxism. p. 296. III. Christianity. p. 398.
Ex-Ante Analysis and Wage Theory; by A. P. Lerner. p. 436.
International Short-Term Capital Movements; by P. Barrett Whale. p. 30.
Italian Finance and Investment; by B. G. Foa and P. G. Treves. p. 270.

A Note on Bank Window-Dressing; by F. W. Paish. p. 456.
A Note on the Diagrammatic Representation of Elasticity of Supply; by R. C. Tress. p. 345.
A Note on the Law Relating to Company Dividends; by R. S. Edwards. p. 170.
The "Rate of Sale" and the "Velocity of Circulation of Goods"; A Comment; by A. W. Marget. p. 450.
Rowland Hill and the Penny Post; by R. H. Coase. p. 423.
A Survey of Milk Distribution; by H. S. Booker. p. 78.
The Theory of Foreign Exchanges; by F. Machlup. Part I. p. 375.
Twenty Years of the Floating Debt; by F. W. Paish. p. 243.
Velocity Analysis and the Theory of the Creation of Deposits; by F. A. Lutz. p. 156.

SUBJECTS

Economics, Applied. Edwards (R. S.) A Note on the Law Relating to Company Dividends. p. 170.
—— Foa (B. G.) and Treves (P. G.) Italian Finance and Investment. p. 270.
—— Horsefield (J. K.) Currency Devaluation and Public Finance, 1929–1937. p. 322.
—— Paish (F. W.) Twenty Years of the Floating Debt. p. 243.
—— —— A Note on Bank Window-Dressing. p. 456.
—— Plant (Arnold) "An African Survey." p. 205.
Economics, Pure Theory. Allen (R. G. D.) The Assumptions of Linear Regression. p. 191.
—— Bernardelli (H.) A Reply to Mr. Samuelson's Note on "The End of Marginal Utility." p. 88.
—— Fraser (L. M.) The Equation of Exchange: A Suggestion. p. 67.
—— Kaldor (Nicholas) Capital Intensity and the Trade Cycle. p. 40.
—— Knight (F. H.) Ethics and Economic Reform. I. The Ethics of Liberalism. p. 1. II. Idealism and Marxism. p. 296. III. Christianity. p. 398.
—— Lerner (A. P.) *Ex-Ante* Analysis and Wage Theory. p. 436.
—— Lutz (F. A.) Velocity Analysis and the Theory of the Creation of Deposits. p. 156.
—— Machlup (F.) The Theory of Foreign Exchanges. Part I. p. 375.
—— Marget (A. W.) The "Rate of Sale" and the "Velocity of Circulation of Goods": A Comment. p. 450.
—— Samuelson (Paul A.) The End of Marginal Utility: A Note on Dr. Bernardelli's Article. p. 86.
—— Schultz (Henry) Comments on "The Assumptions of Linear Regression." p. 202.
—— Tress (R. C.) A Note on the Diagrammatic Representation of Elasticity of Supply. p. 345.
—— Whale (P. Barrett) International Short-term Capital Movements. p. 30.
Economic History. Coase (R. H.) Rowland Hill and the Penny Post. p. 423.
Statistics. Booker (H. S.) A Survey of Milk Distribution. p. 78.
—— Plant (Arnold) and Fowler (R. F.) The Analysis of Costs of Retail Distribution. p. 121.

REVIEWS

Abramovitz (M.) *An Approach to a Price Theory for a Changing Economy.* By L. M. Lachmann. p. 369.
Adarkar (B. P.) *The Indian Monetary Policy.* By J. K. Horsefield. p. 475.
Åkerman (J.) *Das Problem der sozialoekonomischen Synthese.* By H. Bernardelli. p. 461.
Allen (R. G. D.) *Mathematical Analysis for Economists.* By J. R. Hicks. p. 92.
Amos (J. E.) *The Economics of Corporate Saving.* By R. S. Edwards. p. 106.
Benham (F.) *Economics.* By G. C. Allen. p. 94.
Braithwaite (C.) *The Voluntary Citizen: An Enquiry into the Place of Philanthropy in the Community.* By H. S. Booker. p. 115.

Braun (Gerhard W.) *Technik und Folgen der Devaluation.* By J. K. Horsefield. p. 350.
Campion (H.) *Public and Private Property in Great Britain.* By H. S. Booker. p. 363.
Clark (C.) and Crawford (J. G.) *The National Income of Australia.* By H. S. Booker. p. 360.
Cowles (A.) *Common Stock Prices, 1871–1937.* By K. C. Smith. p. 352.
Crum (W. L.), Patton (A. C.) and Tebbutt (A. R.) *Introduction to Economic Statistics.* By Frederick Brown. p. 468.
Curtis (M.) and Townshend (H.) *Modern Money.* By F. Benham. p. 108.
Dantwala (M. L.) *Marketing of Raw Cotton in India.* By Vera Anstey. p. 357.
Deneffe (P. J.) *Die Berechnungen über die künftige deutsche Bevölkerungsentwicklung.* By R. R. Kuczynski. p. 225.
Donaldson (J.) *The Dollar : A Study of the New Monetary System.* By W. M. Dacey. p. 101.
Ellsworth (P. T.) *International Economics.* By Frederic Benham. p. 369.
Fabricant (S.) *Capital Consumption and Adjustment.* By R. S. Edwards. p. 473.
Garver (F. B.) and Hassen (A. H.) *Principles of Economics.* By F. Benham. p. 110.
Gilbert (M.) *Currency Depreciation.* By J. K. Horsefield. p. 350.
Hansen (A. H.) *Full Recovery or Stagnation?* By Frederic Benham. p. 225.
Hawtrey (R. G.) *A Century of Bank Rate.* By F. W. Paish. p. 219.
Heilperin (M. A.) *International Monetary Economics.* By J. K. Horsefield. p. 349.
Hicks (U. K.) *The Finance of British Government, 1920–1936.* By Frederic Benham. p. 347.
Hodson (H. V.) *Slump and Recovery, 1929–1937.* By J. B. Condliffe. p. 222.
Hugh-Jones (E. M.) and Radice (F. A.) *An American Experiment.* By M. J. Bonn. p. 464.
Hutton (G.) *Danubian Destiny.* By Frederic Benham. p. 232.
John Bates Clark. A Memorial. By F. A. Hayek. p. 223.
Jones (D. C.) *Trade Revival in a Depressed Area.* By R. H. Coase. p. 232.
Kevin (J. C. G.) Ed. *Some Australians Take Stock.* By H. R. Randerson. p. 354.
Klopstock (F.) *Kakao : Wandlungen in der Erzeugung und der Verwendung des Kakaos nach dem Weltkrieg.* By Vera Anstey. p. 102.
Koopmans (T.) *Tanker Freight Rates and Tankship Building : An Analysis of Cyclical Fluctuations.* By W. Arthur Lewis. p. 478.
Kuznets (S.) *Commodity Flow and Capital Formation.* By H. S. Booker. p. 228.
—— *National Income and Capital Formation, 1919–1935 : A Preliminary Report.* By A. L. Bowley. p. 90.
Lambert (P.) *La Théorie Quantitative de la Monnaie.* By J. K. Horsefield. p. 476.
Leavens (D. H.) *Silver Money.* By J. K. Horsefield. p. 477.
Lindquist (E. F.) *A First Course in Statistics : Their Use and Interpretation in Education and Psychology.* By Frederick Brown. p. 468.
—— *Study Manual for a First Course in Statistics.* By Frederick Brown. p. 468.
Linfield (H. S.) *State Population Census by Faiths : Meaning, Reliability and Value.* By R. R. Kuczynski. p. 348.
Matolcsy (M.) and Varga (S.) *The National Income of Hungary, 1924–5—1936–7.* By H. S. Booker. p. 360.
Mills (F. C.) *Statistical Methods Applied to Economics and Business.* By Frederick Brown. p. 468.
National Bureau of Economic Research. *Report of the Committee on Prices in the Bituminous Coal Industry.* By R. H. Coase. p. 480.
Parkins (A. E.) *The South : Its Economic-Geographic Development.* By Ll. Rodwell Jones. p. 113.
Peel (Hon. G.) *The Economic Policy of France.* By F. Benham. p. 109.
Pirou (G.) *Les Théories de l'équilibre économique : L. Walras et V. Pareto.* By Marion Bowley. p. 365.
—— *L'Utilité Marginale de C. Menger à J. B. Clarke.* By Marion Bowley. p. 365.

Pool (A. G.) *Wage Policy in Relation to Industrial Fluctuations*. By J. R. Hicks. p. 233.
Reid (M. G.) *Consumers and the Market*. By P. A. Wilson. p. 105.
Research Committee of the Economic Science and Statistics Section of the British Association. *Britain in Recovery*. By Frederic Benham. p. 233.
Robbins (L.) *The Economic Basis of Class Conflict and Other Essays*. By R. G. Hawtrey. p. 466.
Roll (E.) *A History of Economic Thought*. By Marion Bowley. p. 98.
Sauvy (A.) *Essai sur la Conjoncture et la Prévision Économiques*. By A. Shenfield. p. 230.
Sayers (R. S.) *Modern Banking*. By F. W. Paish. p. 96.
Schultz (H.) *The Theory and Measurement of Demand*. By A. L. Bowley. p. 213.
Schumann (C. G. W.) *Structural Changes and Business Cycles in South Africa, 1806–1936*. By G. F. Thirlby. p. 112.
Senior (N. W.) *An Outline of the Science of Political Economy*. By Marion Bowley. p. 368.
Seven Harvard and Tufts Economists. *An Economic Program for American Democracy*. By A. S. J. Baster. p. 467.
Shackle (G. L. S.) *Expectations, Investment and Income*. By L. M. Lachmann. p. 103.
Simons (Henry C.) *Personal Income Taxation*. By A. L. Green. p. 471.
Sinha (J. C.) *Indian Currency Problems in the Last Decade (1926–1936)*. By Vera Anstey. p. 469.
Spengler (J. J.) *France Faces Depopulation*. By D. V. Glass. p. 358.
Sweezy (P. M.) *Monopoly and Competition in the English Coal Trade, 1550–1850*. By R. H. Coase. p. 480.
Tasca (H. J.) *The Reciprocal Trade Policy of the United States*. By Allan G. B. Fisher. p. 221.
The Conference on Research in National Income and Wealth. *Studies in Income and Wealth*. Vol. I. By A. L. Bowley. p. 90.
Thomas (B.) *Monetary Policy and Crises*. By C. Iversen. p. 216.
Thomas (P. J.) *The Central Problem of Indian Economy*. By Vera Anstey. p. 227.
Wallace (D. H.) *Market Control in the Aluminium Industry*. By R. F. Fowler. p. 110.
Walras (A.) *De la Nature de la Richesse et de l'Origine de la Valeur*. By Marion Bowley. p. 367.

Made and Printed in England by The Hereford Times Ltd., London and Hereford. L2577

Ethics and Economic Reform

I. THE ETHICS OF LIBERALISM

By F. H. Knight

The problem of ethics is the most baffling subdivision of the social problem as a whole. For on the one hand, it seems clearly impossible to " talk sense " at all, in the way either of criticism of the existing state of affairs or of any proposal for change (which two things are properly inseparable, for to call a situation hopeless is for practical purposes the same thing as calling it ideal) unless we have a defensible, and hence reasonably clear and stateable ideal to indicate at least a direction of change if not an ultimate goal. Society depends upon—we may almost say that it *is*—moral like-mindedness. But on the other hand, an essential feature of the present social problem itself is the fact that our ethical common sense, the ethical common sense of modern Western civilisation—now commonly referred to as " capitalistic "—seems to be little more than a tissue of vague generality and contradiction. It seems hardly possible to find ethical premises which can be used as a basis for reasoning and which are not matched by other premises equally valid or plausible in the abstract, and as generally accepted, often by the same people, yet which are opposite in sense and lead to different and conflicting conclusions.

Perhaps the basic contradiction, from the standpoint of such a discussion as this, is that which subsists between the absolutist, negativistic, personal idealism taught by Christianity, the religion generally professed in some form in Western civilization, on one hand, and on the other the positive, activistic, relativistic and practical norms of utilitarian mutualism and sportsmanship which actually prevail in workaday life, in so far as this rests on ethical ideals at all. According to the first view, all that is good is the good will; according to the second, " good intentions " are contemptible: it is "results" which count. The situation is well pictured in a sports writer's newspaper headline: "The meek may inherit the earth, but hits win ball games"; and some blasphemous wag has also observed that faith will remove mountains but engineers recommend dynamite, in spite of the expense.

Corresponding to this confusion is that which obtains in the attitude towards power. The Christian ethic repudiates power as a virtue or a value, viewing it rather as an evil temptation; but the ordinary behaviour of Christian-European man suggests as the reason for such professions a sense of shame because he "really" admires or desires little else. Another inconsistency which is almost as fundamental as that just mentioned is the opposition between personal loyalty or fidelity and loyalty to abstract principle, especially to truth. In the attitude toward truth is centred, in fact, much of the paradox of modern ethical convictions. On one hand, truth as integrity is the most essential value, the corner-stone of our ethical thought and our social life; and it is especially sacred in science, where men typically pose as despising all sanctities and values. And yet the least effort to formulate the conditions under which it is really good or proper, or conducive to the general peace and well-being, to speak the truth, rather than some variety and some degree of untruth, will surely bewilder anyone who undertakes the task. Plays have, of course, been written on this theme, but writers find difficulty in dramatizing it effectively without seeming to belabour the commonplace, a commonplace which is unpleasant without rising to the level of the tragic.

What may conceivably be done, or reasonably attempted, in the scope of an article, on the ethical phase of the social problem, is limited at best. This paper will attempt only to give an intelligible statement of the main ethical assumptions involved in free enterprise as a social-economic form, i.e., the ethical axioms which are assumed and must be assumed to be valid in accepting or defending the system —assuming always that it can be and is made to work in accord with its theoretical or mechanical ideal. We must always keep in mind the relations between ethical and mechanical aspects of the critical discussion of the economic system. In so far as undesirable results are due to obstructions or interference of a frictional character in the workings of the organization machinery, the correct social policy will be to remove these or to supplement the natural tendencies of the system itself. In so far as these natural tendencies are wrong, the effort must be to find and substitute some entirely different machinery for performing the right function in the right way. There is much confusion in the popular mind on this point : critics of enterprise economy who do not have a fair understanding of how the machinery works cannot tell whether to criticize it because it doesn't work according to the theory or because it does. And the same dilemma arises if the critic does not know what are his ethical ideals.

It may be well to say frankly in advance that the net constructive achievement of two articles[1] will not be very large. We shall not get much beyond an elaboration of the negative theme already announced, that ethical reflection in modern civilization has hardly come to grips at all with the fundamental ethical problem of social organization. This is true whether we look at the ethical common sense of the man in the street, or at the assumptions taken for granted in our non-scientific literature, essays and *belles lettres*, or at the ethical teachings of our religion, or, finally, at the ethical writings of philosophical specialists and the teaching in our universities. We shall be concerned here with that preliminary clearing and survey of the ground which study has seemed to show is necessary before construction on sound lines can begin.

* * * * *

For lack of a better term, we shall refer to the general type of social order accepted as a working ideal in European civilization in the later nineteenth century, and which until recently was supposed to be in process of realization, as "liberalism". It is the "ethics of liberalism" that this article will attempt to examine. The main content of the liberal ideal was economic and ethical individualism. The tenet which received most emphasis in political and social discussion was economic *laisser-faire*, or political negativism, with specific reference to economic relations. Stated positively, the essential principle of *laisser-faire* liberalism is that each "individual" (really meaning each family—see below) shall be free to use his own resources in his own way to satisfy his own wants. The primary ethical claim on behalf of free enterprise as a mechanism of economic organization is that it leads to this result, i.e., that under this system the " individual " gets the consequences of his own activities, takes out of the social enterprise what he puts into it. In so far as this is true it is of course in a quantitative sense; the individual or family cannot get what it " produces " in the direct sense in which this is true of a primitive self-sufficient household. The assumption is that in the ideal working of such an economic system each contributor takes from the joint product the " equivalent " of his contribution in productive service. The measure of equivalence is exchange value or money price, and the question of its validity involves a correct interpretation of the valuation process of the economic system as a whole, considered both in mechanical and in ethical terms.

---

[1] See note at end.

At first sight, it seems arguable that in such a system there is little or no place for ethics, that it is non-ethical if not unethical; for it makes little reference to moral obligation, especially in a positive sense. But this view can be shown to be an error. Every social order, in fact all organized action, all social life and all human life, is necessarily ethical, in so far as its character is a matter of deliberation and conscious acceptance on the part of its participants. Our main task in this article is to show that the social system of liberalism embodies a genuine ethical ideal and to make clear what the ideal is.

It is a political commonplace that in no society do its member obey the laws from sheer self-interest or purely because of " sanctions ". They must be believed to be " right ", in principle, and in the main. And personal rulers are followed or officials obeyed because their position is accepted as, first, legal, and secondly, in accord with a law which itself is fundamentally " right ". Social institutions must be in harmony with what those who live under them think to be moral—whatever theory one may hold as to the causal relation in history between institutions and moral ideas. Our point here is merely that the basis of social order is opinions on matters of right which are viewed as objective, i.e., as knowledge and not merely or mainly as individual and subjective interests, desires, wishes, or even opinions. As will appear throughout, the relation between interests and opinions is one of the crucial aspects of the social problem. One of the vices of Western thought in the social sciences and of certain of the most popular schools of philosophy is that of " reducing " value judgments to statements of preference, asserting that " this is better " or " ought to be done ", " really " means merely, " I like it ". Popular and practical thinking, on the other hand, characteristically shows the opposite tendency to erect every personal wish or comparison into a cosmic value.[1]

The essential social-ethical principle of liberalism or liberal individualism may now be stated, for the purpose of examination. It is that *all relations between men ought ideally to rest on mutual free consent, and not on coercion, either on the part of other individuals or on the part of " society " as politically organized in the state.* The function, and the only ideally right function, of the state, according to this ethic, is to use coercion negatively, to prevent the use of coercion by individuals or groups against other individuals or groups. Some of the main aspects and implications of this ideal principle may now be considered point by point.

1. In explaining what is involved in this notion and—of at least equal importance—what is not involved in it, we must in the first place maintain a clear distinction between the political and the personal aspects of ethical doctrine. The principle as stated is a theory of the right sphere of political coercion, not of what is right and wrong in individual conduct, or in social conduct, outside the single matter of the individual's role in determining the answer to this one question, in his own political group (or conceivably in other groups).[2] What the leading proponents of liberalism have thought about other ethical problems, such as the nature of the good life, the meaning and content of moral obligation, etc., is a separate question. As we shall see, it has a much less direct and vital bearing

---

[1] Much of our " philosophic " thought carries the first, or reducing, process another step, holding that all felt motives " really " are " merely " incidents in world mechanics or positive natural law somehow conceived. Idealism in the Hegelian sense is not practically different from mechanism in this regard.

[2] In a rough way the sphere of coercion is that of law, but this needs qualification. For law may be taken to include recognised rules of social behaviour which are not " coercively " enforced, and, on the other hand, political coercion may take the form of administrative action which only indirectly if at all comes under the rubric of law enforcement. Law-making, or legislation, presumably does not ordinarily refer to promulgations not meant to be enforced by penalties intended to be adequate.

on the meaning of liberalism, and calls for notice chiefly for the purpose of illuminating the really central, positive issue, the sphere of politico-legal coercion.

2. Our second point is that this principle itself was never advocated in any strict or absolute interpretation. The *laisser-faire* economists of the straightest sect made exceptions of a sort which opened the way to much wider departures from the principle when and as changed conditions might seem to demand. This applies particularly to the great apostle of the movement, Adam Smith. All liberal individualists have recognized the necessity for restrictions on individual freedom, and also for action by the state, for purposes of defence [*sic !*] and police, and for carrying out various public functions, including " certain public works " of obvious public utility but which it would not be profitable for any individual or private group to construct and maintain. The state was to be supported, of course, by taxation, and the liberal notions of tax policy always inclined rather to equalizing the burden than to imposts in accord with benefit received. Moreover, liberalism has always accepted without question the doctrine that every member of society has a right to live at some minimum standard, at the expense of society as a whole—i.e., out of taxation levied as indicated above—if unable to provide such subsistence through his own efforts, the proceeds of sale of services, or through help from his family or voluntary private charity. Finally, Adam Smith and other liberals recognized as a legitimate function and task of the state, provision for the education of the youth, and, in varying degrees, for activities designed to promote the diffusion of knowledge and the advancement of science, art, and general culture.

3. Thirdly, the liberal ideal of mutual free consent applies in all relations of life and not merely in those called economic. The predominant emphasis on economic liberty in the nineteenth century literature no doubt reflected some bias and some misunderstanding on the part of the liberal leaders ; but this is explicable in terms of the particular problems which were important at the time and the historical background out of which liberalism took its rise. In its historical setting it was primarily a movement for the removal of restrictions on economic freedom which had prevailed in Europe in the preceding epoch—that of mercantilism or nationalism. This epoch had also greatly stressed the

economic side of life, but had leaned in the opposite direction, namely, political control or direct political action. We must remember, too, that as a matter of historical fact, the struggle for freedom in its earliest phases related directly to religious freedom even more than to economic, and the mutual-consent principle was always meant to apply equally to all fields of human relations. But this tended to be taken for granted, because the situation did not seem to call for important changes in this respect in fields other than the economic, after the subsidence of the wars over religion. No doubt also, liberals were inclined for historical and other reasons to assume, rightly or wrongly, that it is primarily in the sphere of economic life that opportunity arises for the coercion of individuals by individuals, and that in consequence preventive coercion by the state is called for; and they were perhaps even more disposed to assume that the " temptation " of the state itself to exercise positive coercion is a danger chiefly in the economic sphere.

It should be emphasized that, apart from the historical circumstances under which the liberal political faith arose—as a reaction against measures of economic control which had become anachronistic—these assumptions have no high degree of validity. The truth is rather that the economic sphere of action is inseparable practically, and even theoretically, from other spheres, and the contrary position, in the form of the " economic interpretation ", is one of the worst fallacies, or vices, of current thinking. But for various reasons, it was the " mode " in the nineteenth century to think of social problems of conflict and struggle, between men (or " private " groups) and between the " individual " and the state, and between states, primarily in economic terms. In general, this view cannot be maintained. Every form of human association necessarily gives rise to power relations and to conflicts of interests within the group and between groups, and to rivalry and struggle in both these areas. And these will ultimately lead to violent conflict, " human nature being what it is," in the absence of some regulatory restraint, i.e., of " law " and enforcement, in some form. In any fair appraisal, the casualty list of cultural rivalry and of purely personal clash is far longer than the list for conflicts of economic interest in any proper definition. And there is no reason to believe that if all properly economic problems were solved once for all through a fairy gift to every individual of the power to work physical miracles, the social struggle and strife would either be reduced in amount or intensity, or essentially changed in form, to say nothing of improvement—in the absence of some moral revolution which could by no means be assumed to follow in consequence of this change itself.

The idea that the social problem is essentially or primarily economic, in the sense that social action may be concentrated on the economic aspect and other aspects left to take care of themselves, is a fallacy, and to outgrow this fallacy is one of the conditions of progress toward a real solution of the social problem as a whole, including the economic aspect itself. Examination will show that while many conflicts which seem to have a non-economic character are " really " economic, it is just as true that what is called " economic " conflict is " really " rooted in other interests and other forms of rivalry, and that these would remain unabated after any conceivable change in the sphere of economics alone.

Especial emphasis on economic freedom might however be justified within very wide limits by the fact that it is basic to other forms of freedom, as historical fact and general considerations join in proving. But it is not clear, to the present writer at least, how far the leading nineteenth-century proponents of liberalism actually saw this relationship and took this ground.

4. It cannot be denied that liberal leaders propounded views on the nature of the good in individual life, and these were often vulnerable to criticism. The liberals inclined to hedonism, the doctrine that the good means pleasure. Indeed, they were much addicted[1] to the absurdity of combining or confusing ethical and psychological hedonism, holding that pleasure is at once what men do universally and necessarily pursue in conduct, and at the same time what they " ought " to pursue, the content of " duty ". But whatever any individual, however great or important, may have thought, liberalism is not logically committed to any particular conception of the nature or content of the good, individual or social. The importance of this fact can hardly be too much stressed. As an economic movement, the primary immediate objective of liberalism was freedom

[1] Notably Jeremy Bentham.

for the individual in relationships of exchange, of goods and services, i.e., relations of *quid pro quo*. Beyond freedom of transactions was the more remote objective of increasing " efficiency ". This is a synonym for economy, which is not an end, but an auxiliary or instrumental conception relative to any end whatever, in so far as its achievement is a matter of degree and the degree of achievement depends upon the mode of employing means. The relationship between economy or efficiency and various types of real end or value cannot be discussed here, though we may refer again to the " straddle " in our customary valuation axioms referred to at the outset, that nothing is good but the good will, and that nothing is good but results ; obviously the notion of efficiency fits the second axiom and not the first, and it is also irrelevant to such ideals as obedience and ascetic self-discipline. But the ideal of freedom is relevant to these also.

Regarding the end of action, it is of the essence of liberalism properly conceived to have no concrete position. The end of action is whatever the individual wants and strives to do, or to get, or to be, as the case may be—as far as the main issue, namely freedom from coercion, by others or by the state, is concerned, and as long as he does not infringe on the like freedom of other individuals to pursue their own ends in their own way. The theory is that the individual is, in general (but not without exceptions—cf. use of narcotics, etc.), the " best " judge of his own ends and of the procedure to be used in promoting them. The doctrine never meant that the individual is a perfect judge, but only that he is a better judge, and especially a more impartial judge, than " the government " or any other person likely to claim the right to judge for him. Consequently, according to the liberal view, a greater total achievement of ends actually desired and pursued, and in that sense a greater realization of " good ", will result from a general application of the principle of freedom, with the limitation of mutual consent, than from the application of any other general rule.

5. The principles of liberalism involve no pressure on anyone to practice efficiency in any sense, or to pursue ends in connection with which it has meaning, rather than other ends. He is free to pursue such ideals as " poverty, chastity and obedience " (assuming that he can find someone

willing to be obeyed), or universal " love " or any form of ascetic practice, as long as he does not attempt to coerce others or infringe upon their similar freedom. He is also free to join with others in forming groups voluntarily devoted to the practice of any ideal of life which is not so offensive to the tastes of the larger community as to create danger of violence.

6. In particular, liberalism allows any collection of individuals to organize economic life in any way they may choose. They do not have to establish markets or make exchanges under any form, to say nothing of conducting " enterprises " for profit. They may practice any type of co-operation, and adopt any mode of apportioning burdens and benefits upon which the members themselves can agree. And under the liberal regime groups have tried widely various schemes. But on seeing that co-operative or planned or controlled economic organization does not work out as it figures out (to some figurers), instead of learning their lesson, opponents of liberalism typically pour contempt and scorn upon such experiments as " Utopian " and demand political authority over whole nations or the whole earth. The reasons for this attitude are not so very far to seek in the nature of human nature, but they cannot be explored in detail here. The fact that such propaganda wins adherents among the educated as well as the masses, and threatens to subvert liberalism itself and replace it with a most extreme dogmatic and violent illiberalism, is of course a matter for the profoundest concern. But to return to our theme (and to repeat), liberalism means only that individuals and groups shall not coerce others, and not merely in economic relations, but in any department of life, though freedom for the conduct of enterprise economy was the main immediate objective of liberalism as a general political movement.

It should be pointed out, however, that liberal doctrine involved a tendency to oversimplification of values and motives, for which the hedonistic bias was no doubt partly to blame, or of which this bias was a consequence, as the case may be. The main argument for *laisser-faire* was instrumental, in the general meaning of the term ; it was intended to increase efficiency. On one hand, this obviously involved taking the individual's actual endowment with means as a datum (either as " right " or as unalterable) along with his tastes and other characteristics. This is the main weakness of the system, from an economic standpoint, as will be emphasized presently. Freedom is freedom to use power, of which the individual may possess much or little or none at all, and be equally free.

Apart from this shortcoming, the liberal position itself can be maintained on quite different grounds, some at least as cogent as the tendency of freedom to increase efficiency, and different lines of argument are more or less confused in the literature. (In general, the writings of the utilitarians were not characterized by any great subtlety or analytic profundity.) The context, if not the explicit wording, frequently suggests more penetrating views. Freedom may be, and often was, considered an end or value in itself, and not merely as instrumental to efficiency in realizing other values. And going still farther, the writers would occasionally recognize that freedom is a " good ", not merely in the sense that men actually want it, but in the deeper and more truly ethical sense that men " ought " to be free, more or less independently of whether they wish to be or not. This latter view, that it pertains to the dignity of human life to live responsibly, to make one's own decisions and take the consequences, is in keeping with the religious ethic of Puritanism, which certainly played an important role in the historical culture movement of which liberalism was a phase. Moreover, still another (a fourth) more " practical " line of argument for economic *laisser-faire* is important, and is occasionally met with. This is that the capacity of the state is limited, and that loading it with tasks which it cannot perform will cripple its effectiveness for functions which are possible for it as well as vital for the social life.

7. As already noted, the " end " of the enterprise economy is, in liberal theory, productive efficiency, which means the transformation of the ultimate productive capacity possessed by each individual into the maximum " income ", consisting of " goods and services " reduced to a common denominator in terms of each individual's preferences. The notion of the economic individual will have to be further discussed presently. We now observe that the concept of income contains a twofold ambiguity which has been the source of much difficulty and confusion in technical economics itself. On the one hand, it includes " means of satisfaction ",

specifically the services of persons, logically including one's own services, and also services of " things ", whether " owned " by oneself or by someone else. On the other hand, it also includes any accretion during the time interval for which it is measured, in the total productive capacity belonging to the individual affected. The relation between income in the form of satisfaction-yielding services and income in the form of growth in productive capacity is further complicated by the relation first noted between services rendered to oneself—by one's own person or by things which one owns—and services rendered by other persons and instruments owned by them. And even more serious complications arise from the relation between accretions to productive capacity incorporated in the individual's own person (labour power, skill, knowledge) and that which is incorporated in external things which he owns (capital goods). All that it is in point to say on this problem here is that the use of resources actually owned at any moment in any form is subject to the control of the individual, who, in so far as he behaves in accord with the principle of economic rationality, apportions all his available productive capacity, without regard to its form, among all the alternatives of use open to him, in such a way as to " maximize " the total " return " in all forms, reduced to common units in terms of his own value-scale. (In economic jargon, his value-scale is represented by a " utility function " or satisfaction function or system of indifference curves, including investment as well as consumption.) Opportunities for exchange with other persons (which must in some degree increase the total income of both) count to any one person as alternative modes of use to be considered in apportioning whatever resources he " owns ". The result of intelligent apportionment, according to economic theory, is the maximum provision, to each individual, under the given conditions (especially the similar maximum for all others), of " means of life ", realized either in the form of momentary satisfaction or in further addition to productive capacity; allocation between these two fields and among all the subdivisions of both should accord with the economic principle of a maximum, i.e., equalization at the margin. Beyond this maximum provision of *means*, the ideal of freedom as qualified by mutual consent obviously has nothing to say.

8. An outstanding ethical consequence of the theory of

productive organization through freeing the urge to self-advancement is a new and sharp division in the field of conduct, a new ethical dualism (there are many such dualisms) or at least a bifurcation of the ethical problem. The situation is suggested by the vernacular expression, " business is business ", meaning that business is one thing, and " charity " another. There is a strong feeling that it is " right " to " play the business game according to the rules ", to make exchanges at the ratios objectively set or made possible by the market. That is, it is assumed to be ethically legitimate and even positively virtuous, to *desire* to maximize one's " income ", as defined above, and to act in such a way as to do so, subject always to the sweeping reservation of mutual free consent in all relations with others. (Some problems in the nature of this freedom of consent, especially as regards " persuasion ", and effects on persons not parties to a transaction, will come up presently.)

The question of what is to be done with income when obtained, or the reasons on account of which it is desired, not only receive no answer or illumination from the social-ethical principle so far discussed ; there is even a certain tendency to deny their reality as ethical problems through emphasizing the right of every individual to do as he will with his own and his duty to live of his own and to make it fruitful. In any event, liberalism was emphatic that exchange dealings involve no obligation beyond honesty and non-predation—both primarily negative, but their meaning will call for further consideration later. In the political connection the payment of taxes and assumption of a fair share of the " proper " obligations of society was added. But at that point it would seem that the ethical theory of liberalism as a distinctive principle stops. Certainly the use of income, or specifically the matter of obligation in its use, belongs to a completely separate ethical problem field, and constitutes a different branch of ethical science or inquiry. This branch of ethics tended to be a step-child.[1] We must keep in mind that in the ideal market economy of theory the individual has economic power only in the form of income and also that his income represents his own productive contribution to the aggregate social output.

---

[1] One senses a certain hollowness, for instance, in Spencer's exhortations to and praise of charity, so strong is the balance of emphasis on the repudiation of any properly legal obligation.

However, the public mind or conscience of the civilization which in general accepted the liberal principle has never been clear or at ease on this question of obligation outside of and beyond the business code. Worse still, liberal thought has been much confused about the relations involved, and has never been happy even about the separation, the business-*versus*-charity-dualism which we may call the second axiom or principle of liberalism (the mutual-consent principle being its first axiom). The issue raised is one of the most important factors in the current situation of unrest and crisis. A little headway may be made in the illumination of the problem by considering it briefly in the light of history.

What we call primitive society, as known, and back of which knowledge cannot penetrate, presents as one of its most fundamental phenomena the notion of *equity* as a normative ideal and pattern of individual relationships. The most pungent example of "primitive" equity is the *lex talionis*, "an eye for an eye", etc., which of course represents an almost inconceivably long development of legality and civilization beyond the really primitive anger reaction. The bulk of primitive law is, moreover, law of tort rather than criminal law; it prescribes "damages" to injured parties, rather than punishment for wrongdoers. In our own society the notion of equity is still largely that of the preliterate tribal stage; we try to get away from it to what we consider higher ethical norms, but make slow progress. "Reciprocality" in all our emotional and social life, the return of cordiality for cordiality, snub for snub, if not blow for blow, affection for affection, and the "repayment" of gifts, visits and entertainments in kind, seems as inevitable as a precise calculation and explicit negotiation of terms (or compounding in money) is repugnant, so that one wonders about the realism of any ethical teachings which pretend to get very far away from this level, especially through discussion. But of course there are exceptions, a sort of fringe around the blanket of *quid pro quo* which moral progress may gradually extend from generation to generation.

Primitive equity also includes what we vaguely think of as economic reciprocity, the "exchange" of goods and services, but under very different conditions and forms from those of modern commerce. For the most part trade is foreign trade, and in general is highly ritualized; and the ratios of exchange, the prices, are very rigorously fixed by traditional standards. Much intertribal exchange is a pure ritual, without economic significance, though involving a substantial "cost". When conditions change and the amounts of any ware or token which will be supplied and demanded at the traditional prices become too unequal, other forms of interchange, especially gifts, largely take the place of exchange before prices yield. We find the same phenomena in "backward" areas to-day.[1] One of the great historical-anthropological problems is that of the development of markets in the modern sense, with flexible prices responding freely and accurately (more or less !) to changes in supply and demand conditions. It can be said with confidence that this happened first in the field of foreign trade, trade between groups, and was introduced into intratribal relations much later.[2] Exchange of services is a late development, and it is an important fact that labour is a commodity which—apart from the trade in slaves—can hardly be a subject of international trade, and even with slavery can never give rise to a highly perfect market. The factual point to be made clear now is that the business-ethics principle of exchange of equal values is an obvious modification of primitive economic equity ; the difference is that the value equivalence itself is subject to free adjustment in the market instead of being fixed by tradition at a specific figure.

But it is vitally important that, due largely to the survival of primitive notions of personal equity, modern civilization in general has never wholeheartedly accepted the dualism of "business *versus* charity", in business itself, or accepted its sharp dichotomy between standards of formally organized behaviour and the ethic of personal human relations. The notion of "fair price" and even of a considerate or humane price has persisted with varying strength in different connections, depending in part on the actual effectiveness of competition, in greater part on the public's conception of its reality and effectiveness, and in large part on more subtle factors of "psychology".

In any case, one of the main factors in the present crisis is that the public has lost faith, such faith as it ever had, in the moral validity of market values. In large part, as suggested, this is due to the failure of even the educated public to understand the mechanics of exchange relations, and to the existence of monopoly and of friction in price and production adjustments. It is especially in the field of wages, the price of "labour," that the tendency to reject market standards is strongest. But the dualistic principle must be accepted wholeheartedly in relation to economic organization if the kind of civilization we call free is to exist.[1] Business must be separated from "charity", meaning all personal considerations. The principle of business-is-business is on a par with that of justice-is-blind, though both must be sometimes seasoned with mercy. Moral obligation to persons in consequence of special relationships is the general principle of feudalism, and is anachronistic and disruptive in a commercial or enterprise economy. Yet it persists; and not only in connection with the employer-employee relation; it, or its conflict with business principles and with wide areas of law as a whole, remains a fundamental aspect of the ethical problem-situation in modern society. The mixture of intellectual confusion with value judgments in the discussion of problems of economic ethics, as it takes place, baffles analysis, and is of course most sinister in import.

---

[1] Cf. a paper by John H. Sherman, "Some Observations on Custom in Price Phenomena," *American Economic Review*, XVIII (1928), pp. 663 ff. It may be noted that at times of catastrophic change, either in the direction of shortage or demoralising superabundance, the price system tends to give way even in our own culture and be replaced by rationing, price-fixing, governmental absorption of "surpluses" and the like.

[2] See Brentano, *Die Wandlungen der wirtschaftlichen Einheit* ; Hoyt, *Primitive Trade*.

9. It must be kept in mind that the main immediate driving force back of the liberal revolution in political thought was a technological revolution which could only work itself out, and yield the enormous increase in economic efficiency potentially available, through economic transactions between individuals spread over a vastly greater geographical and social area than that of the primary social group, or any natural community, an area within which "social" relations in the ordinary sense become physically impossible.[2] The natural result was "economic" conflict

---

[1] Business must be allowed to operate on business principles in relation to its given and legally defined conditions and these must be clear and reasonably stable. Undesirable features and results of the economic order can be modified through taxation and public expenditure, and perhaps changes in the laws of inheritance, but only within the very narrowest limits through price fixing and other arbitrary interference with the workings of the markets. In these fields general laws mean a straight jacket and administrative discretion an intolerable fog of arbitrariness and uncertainty.

[2] And they still are for the most part. Development of instantaneous communication has changed this somewhat and may change it more if television develops sufficiently. But there is another and especially sinister aspect to mechanico-electrical intercommunication itself. Mechanism may make it possible for any number of individuals, even the whole population

and the necessity of legal regulation of economic relationships, in this larger area, where " social " problems inevitably take a " political " form. But the contrast between social and political is a vague one. These wide-area relationships involve just as much conflict of interest and opportunity for clash as, say, a card game or neighbourhood social rivalry; but the conflicts take a special form, which we tend to call political because of the character of large-group psychology and behaviour. It is, however, a fallacy to view them as economic, which is no more true than it is of personal dislikes or family feuds. There always have been rivalries and wars between groups formed on every conceivable basis, local, political or religious, or even purely artificial or partisan. In modern times the somewhat special form of nationalistic rivalry tends to predominate.

10. The next point has to do with the nature of political coercion, beyond its negative role, and with the nature of the state. It is of the essence of liberal doctrine that action by the state is not action by individuals, although of course it is carried out, in the concrete, by human beings, officials of some kind. The liberal state is essentially " The Law ".[1] In the liberal view, the individuals who implement state action do not act as individuals, but are the agents of the law, and the law is the creation of society as a whole, of the " sovereign people ", and not of individuals. The same principle applies to legislators as to other officials. Of course this is an ideal, which no conceivable machinery could realize at all perfectly; but it is an ideal of fairly definite and intelligible meaning, and surely is one of ethical character and import. Undoubtedly it received its purest and classical formulation in the eighteenth century, at the hands of the political theorists in the British colonies in North America, and in the United States as a nation during its formative period. It is embodied in the principle, or slogan (of older date), " a government of laws and not of men ". Much, of course, might be said about this ideal,

---

of the world, to listen or attend at the same time to the words and perhaps the facial expression and gestures of any one individual. But no invention can ever increase the efficiency of communication in the converse sense in the least degree. In spite of all science and technology it will remain impossible for one person to listen or attend at the same time to more than one! The whole tendency is to increase the effectiveness and power of " leadership " and to multiply mob-mindedness.

[1] This was not true genetically; the state was originally the military system, and law was a social phenomenon of a non-political sort. The state gradually assumed legal functions and at first only on the side of law enforcement; conscious law-making, or legislation, came much later.

as regards its practical consequences, in relation to various circumstances and conditions; notably the contrast between the conditions of frontier settlements, on a virgin continent peculiarly rich in natural resources, and those which obtain in the United States (to say nothing of Europe) toward the middle of the twentieth century. But our concern here is with the ideal.

The primary difficulty with the notion of law as an ethical principle or norm is that the content of the law itself can never be taken as simply "given", or beyond dispute, even at a given moment. In the liberal doctrine in its original form, this problem did not seem serious, because of the limitation of law itself and of its functions to the negative role of suppressing coercion. But even under this restriction, there was always and inevitably occasion for "interpreting" the law, in enforcing it, and also for making law outright, i.e., changing it, in consequence of changing conditions and standards.

11. We should next consider the meaning in liberalist thought of that coercion of individuals by individuals which it is the primary function of the state, i.e., of legal coercion, to prevent. To begin with, this was taken to mean simply "force and fraud", concepts which it was assumed could be fairly easily defined by legal process and in words, with sufficient definiteness and accuracy for practical purposes. This view now seems naïve, to the philosophic student of the problem; a very little perusal of a legal encyclopædia under the pertinent headings ("duress" and "fraud") will show that the problem admits of no definite solution.

In connection with private coercion we must also deal with the distinctively economic category of monopoly. For the liberals of the nineteenth century, and even earlier (notably in England, and notably those classed as economists) clearly recognised that monopoly is a form of coercive power, and inadmissible in a "free" state. As is well known, at least among students of economics of the present day, the liberals, and specifically Adam Smith, tended to assume that monopoly would not require coercive repression, that it would not arise to an important degree in the absence of positive support, aid and abetting, on the part of the state itself. This indeed is still a "moot" question, one on which the writer has no very positive opinions, but on the issue of which he is by no means so optimistic as, for example, Professor von Mises, and Professor Robbins of the London School of Economics. However, it must be admitted that governments have never given the original liberal position any fair trial, and do not seem in a way to do so, in the visible future, even in the United States or Great Britain.

12. The observation next in order, as a sort of footnote, is that the " individualism " of liberal doctrine by no means excludes, but rather expressly includes, guidance of the activities of one individual by another, in the interest of increasing efficiency through more competent direction. It means only that the individual must be " free " to place himself under direction and guidance or not to do so, and hence to choose his own counsellors, and to follow their advice or not to follow it in any particular case, and to discharge a counsellor at will, with or without replacing him by another.

A peculiar and important consequence of the freedom to accept and to give advice or counsel (by free mutual consent) is that in many fields advice or counsel becomes a commodity in the market, subject to competitive purchase and sale. In fact the separation between direction and execution is one of the most important cases of the division of labour. Professions which tell others what to do include among many others the law, medicine, and business management. But expert counsel or leadership is a commodity unique in the absolute logical impossibility of standardizing it or even describing it objectively. This means that the market is peculiarly imperfect; and this fact helps to weaken popular faith in market values, and has wide ramifications.

13. We come now to consideration of certain elements of vagueness and ambiguity in the liberal principle of mutual free consent. Three examples call for notice. The first, and logically most puzzling, has to do with contract, the freedom of an individual to alienate his own freedom—for any consideration which appears satisfactory when the contract is made—for some specified period of time in the future and with respect to some specified scope of activity. Freedom to dispose of one's own freedom is evidently something of a paradox ; it obviously has in practice to be allowed within limits but just as certainly has to be limited if freedom as a general condition is to be maintained.[1]

---

[1] The problem is somewhat akin to that of free exchange in dangerous drugs, weapons, etc. and it is still more closely related to the problem of lending and borrowing at interest, which are universally prohibited in primitive society—though gambling is usually less stringently dealt with !

Liberal doctrine, according to my own impression, which is based on limited knowledge of Anglo-American law, has never had any clear position on this matter. In America, the problem receives a peculiar twist from the special emphasis of our founding fathers on " inalienable rights ", from the fact that our government rests on a set of written constitutions, including national and state bills of rights—also from the circumstance that chattel slavery as an institution became established under peculiar conditions and was abolished only at a very late date in history, in consequence of a long and hard-fought civil war, the results of which, again, were incorporated in the federal and state constitutions. It is evident that freedom of contract, i.e., the extent to which the law will enforce contract binding anyone for the future (or permit any other enforcement), must be restricted to narrow limits if anything like individual liberty, in a practical common-sense interpretation, is to be maintained (if it is not to run into " involuntary servitude "). But on the other hand, this inalienability of control over one's own person, meaning especially over its economic powers and capacities, though based on the peculiar sanctity of such control, results in placing in an especially weak position anyone who owns productive capacity only as embodied in his own person in the form of labour power. For what cannot be sold cannot be pledged ; and the man without " property ", in the usual meaning of the term, is dependent upon a practically continuous opportunity to market his services, as well as upon continuous possession of capacity to render service, in order to secure (for himself and dependants) the means of livelihood. For these means must of course be had in almost completely continuous flow—" three meals a day ", or some other number. This " would be " the case if " society " made no provision for " relief ", outside the system of exchange relations ; but of course some other provision is necessary for many categories of the population, who do not have " productive capacity " to sell of sufficient value to afford a socially acceptable scale of life, and this obligation on the part of the state has always been a feature of liberalism.

14. The second element of vagueness is of a different kind but of equally vital importance. It arises out of the fact that a large part of the goods and services which are subject to exchange cannot be effectively standardized,

because their relevant qualities and characteristics are not a matter of common knowledge and direct observation, or of physical measurement, but are very largely a matter of judgment and there is wide diversity of opinion. In such cases, market dealings inevitably become affected by *efforts to persuade*, on the part of the seller or buyer or both. As it works out, also inevitably, it is ordinarily the seller who immediately sets the price, and marketing becomes a literally " competitive " endeavour or struggle on the part of sellers to influence buyers. (The Economic man neither competes nor higgles—nor does he co-operate, psychologically speaking; he treats other human beings as if they were slot machines.) In a sense, what is involved here is a coupling with physical goods and services of information about them, which the buyer purchases, and of course pays for, along with the physical entities themselves. The social problem involved theoretically comes under the head of fraud; but the field in which, and range over which, assertions about wares cannot be viewed as objectively true or false is so limited that, from the standpoint of common sense, what is involved is rather the exercise of a kind of coercive force, or at least a struggle between opposed " forces " and not an exchange. The problem ties up with the general fact of uncertainty as a limitation on rationality. This is an infinitely complex and subtle problem; uncertainty itself is subject to uncertainty; we do not know how much we know, or how accurately; there is no visible boundary between knowledge, opinion, and ignorance.

The crux of the matter, from the standpoint of the workings of an enterprise economy, is the fact that the machinery of law, the formulation and enforcement of criminal statutes or precedents, cannot deal satisfactorily with these phenomena in terms of either coercion or fraud or the two combined. To the extent that there is no objectivity in the matter at issue there can be none in the law. At the same time and for the same reason, the machinery of the market also fails to evaluate as information or counsel the persuasive or " selling " activities of parties to transactions. The role of middlemen whose whole business it is to buy and to sell the same wares, presents especially interesting features. The whole arena is one in which, *prima facie*, high ethical standards and sentiments might be expected to produce results beyond those possible for any formal social machinery; and, in fact, ethics plus certain considerations which tend to make honesty good business policy, probably has more weight than legal action, though it remains necessary to treat as fraud and as criminal such persuasive efforts as go too far and fall "reasonably" within that category. The factor most neglected by critics of the enterprise economy is the irrationality and greed of the consumer himself; but outside the highly organized markets the whole system is saturated with "sentiment", rivalry and suspicion, and "strategy"—a polite name for trickery.

15. The third of the qualifications referred to is that the primary principle of liberalism, free mutual relations, takes no account of inequality in economic position. The ability of one party to bring to the market a vastly greater quantity of saleable service value than another, coupled with imperfections in the market mechanism, may amount to the exercise of coercive power by the stronger party over the weaker. From the standpoint of pure theory, it is the market imperfection which is primarily in point, and this may operate in special circumstances to place arbitrary power in the hands of the "weaker" party, the party possessed of less economic power as measured from a long-run point of view. The outstanding case, in the popular mind, is, of course, the "bargaining" between employer and employee. But the popular notions regarding the intrinsic superiority in bargaining power of the employer are very largely false. This is true even apart from situations where there is effective monopoly in one form or another; and the monopoly factor itself may operate on either side.[1]

Freedom of accumulation not only carries with it the possibility of cumulative increase in the inequality of *economic* power, and creates a strong tendency in that direction; in addition, economic power confers power in other forms, including the political. And freedom of association is equally important in the same connection, since association may be for the end of power as well as that of efficiency. Freedom of association also raises questions as to the meaning and limitations of mutual consent, questions which cannot be taken up here.

---

[1] It seems necessary to refer in various connections to the failure of economic teaching to give even the educated public any conception of the actual workings of competition as a mechanism of control, which failure and lack are one of the most serious causes of the failure of the system to work effectively.

16. Before turning to considerations of a somewhat different kind, it may be well to consider the general meaning of the principle of freedom, in the light of the points already made, but from a somewhat different point of view. Politico-legal freedom, i.e., the restriction of organized social action to the prevention of force and fraud, means that within the sphere of Freedom, i.e., outside the sphere of legal control, social relations are left to the control of "social forces" other than law as deliberately enacted and enforced. That is, all relations not covered by the concepts of force and fraud, as defined in the terms of the law and in its actual enforcement, are controlled by other, less formal and deliberate modes of action or social processes. Further investigation and analysis of what is involved in these other forces or control processes would have to inquire into the philosophical problem of "free" activity, first in the individual, in "private" action, and secondly in social behaviour under "free" mutual consent. Free activity would have to be compared and contrasted with such other categories as (*a*) the exercise of control by one free agent over another, by innumerable means and methods; (*b*) control by society over individuals; and (*c*) "positive" cause and effect, physical, mental, "moral" and cultural. In such an inquiry methodological and philosophical problems step into the foreground. Any pure cause-and-effect relation means that the social-human unit is an incident in an inevitable flow of cosmic process in some conception. All notion of effective purpose is excluded and all discussion—such as the present effort—and likewise the efforts of the advocates of natural or dialectical cause-and-effect—is reduced to meaningless physical or metaphysical process. But the main point is simply the fact that the hands-off policy on the part of the state means leaving the course of events to such other causes or controls as do and will actually operate under the conditions present. Its opponents are right, as far as they go, in insisting that inaction is also a policy. These other forces or controls, apart from politico-legal action, cry for classification and analysis, but the task, the main problem of sociology and social philosophy, cannot be undertaken here.

17. It is to be emphasized that acts most freely assented to and actually advantageous to parties immediately and directly affected almost always have effects for evil or good

on others, whose consent is not obtained. The liberalism of the free market provides for the consent only of parties to transactions. Where either good or ill effects accrue to others, such a system cannot protect the interests of remote persons in wider circles, or motivate action which "radiates" beneficial effects. This, however, is rather a mechanical than an ethical weakness in the mutual-consent system, and its detailed consideration is outside the scope of the present article. As already noted, liberals have always believed both in political action for protection of important unrepresented interests and for "public works". But theory must recognize that a most intricate and subtle combination of public and private enterprise would be required to secure anything like a maximum utilization of resources in terms of purely individual interests. And the problem of community interests would call for separate consideration.

18. These reflections naturally lead up to the most important single defect, amounting to a fallacy, in liberal individualism as a social philosophy. The most general and essential fact that makes such a position untenable as an exclusive principle of organization is that *liberalism takes the individual as given*, and views the social problem as one of right relations between given individuals. This is its fundamental error.[1] The assumption that this can be done runs counter to clear and unalterable facts of life. The individual cannot be a datum for the purposes of social policy, because he is largely formed in and by the social process, and the nature of the individual must be affected by any social action. Consequently, social policy must be judged by the kind of individuals that are produced by or under it, and not merely by the type of relations which subsist among individuals taken as they stand.

From the economic point of view, both this fact itself and its vital importance are especially obvious. The economic individual is a complex of three main sets of factors; namely, wants, physical capacities (of himself and all that he owns) usable in satisfying wants, and knowledge of the processes involved in the direct and indirect use of means in rendering want-satisfying services, i.e., in "production" and "consumption". It cannot require more than a reminder and a moment's reflection to make any person interested in the facts realize that all three elements in the individual are very largely built up in and moulded by the social traditions, institutions, and processes of the culture in which the individual grows up. More specifically, they are largely the product of forces operating in primary-group life, in which the "primary" primary group, the family, is overwhelmingly important. It is chiefly from and through the family that the individual is formed and endowed in all these respects.

---

[1] We reserve for later and extended consideration the fact that the other commonly accepted systems of social ethics make the same mistake, notably the Christian ethic.

Indeed it is evident (as we have already remarked) that liberalism never really meant individualism, and could not do so, in view of unalterable facts of life. From the standpoint of social policy, as well as that of scientific history or sociology, the " individual " is an evanescent phenomenon ; he comes into the world destitute and helpless, and necessarily remains a liability for a large fraction of his life-span, before he can become an asset to himself or an " individual " with capacity for membership in an organization of responsible units. In the nature of the case, liberalism is more " familism " than literal individualism. Some sort of family life, and far beyond that, some kind of wider primary-group and culture-group life, of a considerable degree of stability, must be taken as they are, as *data*, in free society at any time, until they change or are changed, by action in accord with policy, into other forms. This is true not only because primary groupings and institutions are in fact " there ", but because no society could possibly exist without them ; and to safeguard them where it is necessary, and improve them where it is possible, must be the first concern of any intelligent social policy—on a level with the preservation of physical life itself. " Man is a social animal." And the social philosophy of freedom and mutual consent is finally tenable only in so far as it can be shown that there is a natural harmony of interests between individuals and between the individual and society as free behaviour affects the social structure at the level of primary-group life, as well as harmony of interest between individuals in their individual interests. For the most part, liberalism, in taking the individual as given, took society for granted also. It recognized, indeed, the right of " the people " to change their political constitution, and to make laws touching property and the family. But this could only mean the people of an existing political unit, or in fact, far more narrowly, the existing control system in such a unit. The revolutionary liberals were, as opponents have again pointed out, excessively rationalistic; they did not seriously consider the problems involved in the relationship between freedom of transactions and political freedom on one hand, and freedom of association in these wider institutional contexts of family and primary-community life on the other. Social policy in terms of action (beyond the merely preventive) means law-making; which is to say law-changing; and only to a very limited extent do individuals act independently in their efforts to bring about changes in the law. They act chiefly as members of groups, either previously existent, or spontaneous and *ad hoc*, or deliberately organized, or combining these characteristics in various ways and degrees.

19. From a practical point of view the naïve faith in the power and benevolence of the non-political and non-legal social forces which is logically presupposed in *laisser-faire* individualism, is questionable in connection with all three of our economic factors in the individual, but in connection with the third—his endowment with economic or "productive" capacity—it is palpably untenable. In free society, in the legal sense of a society which does not tolerate slavery, productive capacity falls into two main divisions—(*a*) the physical and mental qualities and endowments of the individual himself, and (*b*) earning power embodied in the properties of external things "owned" by the individual.[1] In the popular mind and in the propaganda of reformers, there is a sharp ethical contrast between these two forms of earning-power, between "property" and "human rights". It is very hard to find much foundation for this view in the facts. Both forms of earning ability are alike in being largely created and conferred on the individual by the social-cultural process, and primarily in and by the family. Both forms of capacity are partly inherited and partly built up by the individual. They are built up by "investment" in the individual himself or in

---

[1] Under the individualism of pure theory one individual has no power or control over the productive capacities of another otherwise than through purchase from moment to moment in a free market. In reality there are considerable exceptions. The case of minor children is perhaps the largest; but the serious imperfections of the market for "labour" (really markets for innumerable kinds of labour) give rise to more political discontent. It should be noted that all intangible property, including "good-will", represents claims against or control over the productive power of persons or of things owned by them.

external things, as the case may be. The investment in both cases is made partly by the individual himself and partly by others (" parents ") or by society—on the basis of an inherited nucleus or " start ". Ethically considered, both forms or sources of income seem to be more or less equally affected by the same complex of factors—inheritance, intelligent and conscientious effort, fate, fraud and " luck ".

In a " free " social-economic system there is every presumption that movement will be away from and not toward fundamental human equality. It " tends ", more or less effectively, to realize " commutative " justice, but " distributive " justice is completely ignored. And real human equity seems clearly to include a right to " be " equal as well as to " have " equal " rights ". Freedom, again, means the right to do what one is able to do, i.e., to use power, and has content only in so far as one possesses power. Equal right to use unequal power is not equality but the opposite. The difference illustrates a fact which will concern us especially as we go on to a comparative consideration of ethical systems; namely, that social ethics must look to the distant future and take into account the unborn and the whole character of culture, and not merely relations between given individuals.

Moreover, even commutative justice or equity—quantitative equivalence between what the " individual " puts in and what he takes out—has meaning only for the independent recipients of income. The effective social unit in consumption is the family, and for other members of the family than the head, at least for all " dependents ", there is little or no relation between reward and contribution, or desert in any form. The position of wives is quite anomalous —their economic status being a " reward " chiefly for their wisdom in choosing husbands—and the injustice to children cries out to heaven. But these matters for the most part go with the family as a social institution; and it is doubtful how far they can be altered by any change in the economic organization, particularly because the changes proposed mean substituting politics (competitive or monopolistic) for economics (property and the market).

In an economico-ethical or political view, property is simply power to render saleable service, in a form which is itself saleable or exchangeable outright. But purchase and sale of property is an incidental feature of economic life or economic organization. The essential thing is exchange of services, by whatever agency they are rendered. Nothing fundamental would be changed in economic society if all property except the most perishable consumption goods were " entailed " and could not be alienated. Investment and accumulation would persist, and the interest rate would have the same economic significance as " now ". Moreover, none of these things would be substantially changed by establishing " socialism ", with property ownership and the control of enterprise a monopoly of the government.

As suggested at the outset, the principle of *quid pro quo*, of equality in exchange, defines a power system as regards relations between individuals. It has moral significance only in so far as the individual's contribution, what he brings to market, has moral significance as a measure of desert. There is, indeed, a moral factor (universally regarded as such) in the mode of use of resources, though this " intelligent efficiency " in pursuit of one's own self-interest, seems ethical in a rather " low " and even dubious sense. But the individual's economic status depends altogether on his *possession* of economic capacity, and this is justified in moral terms only in so far as it has come about through the intelligent use of pre-existing capacity, and of course only in so far as the efficient use of capacity in one's own interest is an ethical virtue.

The meaning of freedom is freedom to act so as to make changes in the course of events, as it would be or occur in the absence of such action. That is, it is freedom to use power, possessed in some form, to this end. Any intelligent defence of freedom as a principle, or effort to discover its proper limits, must consider the long-run historical consequences and must be based upon knowledge of what men will do with freedom and what effects their acts will have on the social life as a whole. It is not merely a question of the conflicting individual interests of different individuals. Market dealings leave wide circles of contemporary individual interests unprotected and fail to give others effective expression in motives to action and this fact alone calls for compulsory co-ordination of activities by some inclusive group organization. The individual cannot possibly know the effects of his acts or transactions even upon living persons and their interests, and still less upon " civilization ", beyond an extremely narrow segment of space and time, and even then usually neither accurately nor at all completely. He does not " know " their effects upon himself but always *takes chances* in various ways and degrees.

20. We are not at the moment concerned with the question whether or under what conditions some organ representing the group and acting or ordering action on its behalf may be able to see farther or more correctly (and may be relied upon to act in the general interest). The point at the moment is simply that society has strong reasons for maintaining powerful brakes on departures from the " beaten path ". Primitive society was wise in its conservatism, for it knew at least that the group had previously lived somehow, both as individuals and as a group. And liberal society, it now seems, has acted frivolously in switching over quite suddenly to an extreme opposite set of assumptions, that the new is better than the old, that the good consists in change, or at least in freedom of the individual to make changes, rather than in stability. This emphasis on the necessity of an *onus probandi* in favour of conservatism, and against change, must stand as our last word at this point.[1]

---

[1] A second article will continue the discussion from the standpoint of comparative ethics, especially the relevance to the fundamental problems of economic reform of the teachings of Christianity and of Marxism, and with some reference to the more philosophical movements, pragmatism, and idealism.

International Short-Term Capital Movements

By P. Barrett Whale

In recent discussions movements of short-term capital between countries have generally been referred to as a source of disturbance and instability. On the other hand, it has been recognised in the past that temporary loans can play a useful part in offsetting short-period fluctuations in a country's international balance and in smoothing the effects of more permanent changes; in fact, it has long been an important part of bank-rate policy to encourage these capital flows in appropriate circumstances. It seems to be clear at the outset, therefore, that the effects of international short-term capital movements must vary according to the attendant circumstances.

The purpose of the present paper is to relate the different cases in which these short-term capital movements occur to their different effects. This involves a classification of the movements, but since our interest is centred in their effects, I shall endeavour to distinguish the different cases which actually occur from this point of view, rather than to build up a complete classification by the method of logical division.

I shall not dwell much on the fact that a country which incurs considerable net short-term indebtedness to foreigners is exposed to the danger of embarrassment through sudden demands for repayment; for apart from its obviousness, this effect is common to most of the cases which we have to consider. The one exception that comes to mind is the case in which a country borrows abroad in order to purchase raw materials for her export industries. The kind of effect to which I wish to direct attention is the influence of the capital movements on incomes, prices and the circulation of money in the countries concerned—that is, in inducing expansions or contractions of monetary demand in these countries. It is this aspect of the subject, I think, which most requires elucidation, and it is here that the most interesting differences are to be found between the different cases of capital movement.

In recent discussions the thesis has been advanced, tentatively by some writers and rather uncompromisingly by Mr. Kindleberger in his *International Short-Term Capital Movements*, that an international movement of short-term capital is accompanied by an inflationary effect in the country parting with the capital and a deflationary effect in the country receiving it. It might be said that it is my present purpose to distinguish the cases in which this at first sight rather paradoxical view is true from those in which it is not.

The main classification which I offer is a fourfold one.

1. International investment may take place on short-term in order to take advantage of superior investment opportunities in a foreign country, in other words, from the same motives and in the same kind of circumstances as are considered normal in the case of *long-term* capital movements.

Foreign credits in connection with international trade are perhaps the most important examples of this type of capital movement. Foreign loans may also be used to finance purely domestic investment. For example, an exceptional expansion of trade in one country may raise interest rates there above the level in other countries and attract capital from abroad. I wish to leave on one side for the moment the case of foreign investment in security markets, so refer here only to the possibility of foreign capital flowing through the short-term money market to domestic business. A special case in this class with its peculiar problems is the use of foreign short-term capital for long-term domestic investment, as in Germany during the period 1928–30.

The common feature which I wish to emphasise with respect to short-term capital movements of this class is that there is every reason to expect that the capital movement will lead to additional investment in the country receiving the capital. This means that the increase in the supply of goods available through the real transfer of the capital (whether as a result of increased imports or reduced exports) should be matched by an increase in demand, through the exercise of the buying power made available by the loans. So far there is nothing either inflationary or deflationary in the process for either of the countries concerned. Interest rates will, of course, tend to be raised in the country parting with the capital, but the raising of interest rates through an increase in the investment demand for capital is not deflationary. (The increase of exports in relation to imports represents investment for the lending country as much as the production of capital equipment at home.) It may be, however, that some change in values is necessary in order that capital may be transferred in the form of goods. This is the transfer problem about which so much has been said in connection with long-term capital movements. As the same technical analysis applies to these short-term capital movements, it is not necessary to repeat it here. It suffices to say that the redistribution of demand consequent upon the transfer of buying power from one country to another, may be " favourable " to the factors of the receiving country. If this is so, the price and income structure of that country will have to rise relatively, and if exchange rates are fixed (gold standard case) this means absolute changes in terms of money—expansion in the receiving country, contraction in the lending country. Gold movements may occur to facilitate these changes.

Clearly there is nothing here to suggest that a deflationary development in the receiving country is generally to be expected.

2. My second class of short-term capital movement occurs exclusively in gold standard conditions, and then presupposes some rigidity in currency supplies and reserve requirements.

In brief, my suggestion is that short-term capital movements may in these conditions be the means of bringing to a country the gold required for reserves or internal circulation in order to maintain a pre-determined level of prices and incomes.

The best examples of this type of capital movement are provided by Professor Beach's study of the cyclical character of British international gold movements in the pre-war period. As I understand Professor Beach's argument, in times of active trade more gold was required in Britain for currency purposes. So far as the gold was not available, the effect was not to depress British prices below the world level (as quantity theorists might expect) but to raise interest rates. Higher interest rates then attracted capital on short-term from abroad, and this capital came in the form of the gold required. Reversely, low interest rates in times of depression carried away redundant monetary gold.

In the case of these cyclical movements, it must be supposed that the level of prices in the one country, Britain, was determined by the world level at the same time. There may also be analogous *seasonal* movements because the price level in a country cannot fluctuate much between the seasons of a year, whilst the amount of money required to maintain that price level may vary considerably. Collating the two cases, cyclical and seasonal, in the one case the price level is more or less determined by interspatial relations, in the other by intertemporal relations, and if the quantity of money is at times inappropriate to the given price level the effect on interest rates causes capital movements in the form of gold.

In principle the distinction between my first and second class of capital movement is clear, for in the one case what the borrowers want is goods, in the other money. In practice it may not always be easy to distinguish the two types because, as has been mentioned, some movement of gold may occur in connection with the first type. But for my present purpose this difficulty is not serious, because from the point of view which most concerns me, the effects of the two types of capital movement are broadly similar. The effect of an inflow of capital of this second type is obviously anti-deflationary, not deflationary.

3. The third class of short-term capital movement which I wish to distinguish is that to which Iversen and other writers have given the name " equalising " capital movements.

As the name indicates, these are movements of capital (loans) which serve to offset a positive or negative balance of international payments on other accounts. In gold standard conditions they are a useful substitute, at least for the time being, for gold movements. In the absence of an international standard, they are indispensable if exchange rates are not to fluctuate rapidly through an almost infinite range.

In a sense any one item in a country's balance of payments can be said to offset the balance of all the rest. Naturally something more than this is meant when certain short-term capital movements are described as "equalising." It is implied that the capital movements arise from the need of a balancing item and would not occur otherwise. There appear to be two ways in which the "market" may be induced to provide "equalising" capital movements.

(*a*) By the expectation of an exchange profit. That is, the exchange depreciates by a certain amount and is then supported by purchasers who hope to be able to resell later at a higher price. Sometimes the profit may be assured through a forward sale.

(*b*) By offering an advantage in interest rates, that is, by raising rates relatively in one centre in order to attract foreign funds. In so far as an interest differential provides the attraction, these equalising capital movements have a point in common with the movements of the preceding two classes. But the circumstances in the borrowing country are obviously different. The contrast here is sharpest between the circumstances which lead to my first and third classes respectively—between the offer of higher interest rates because of a demand for funds for additional investment expenditure and the offer of such rates in order to cover the deficit resulting from an unbalanced distribution of existing expenditure in international trade. The difference between my second and third classes, applying only in gold standard conditions, may be described as the difference between borrowing to increase the supply of money and borrowing to avoid a contraction in that supply.

These two ways of attracting equalising capital movements may be regarded as alternatives. If exchange rates were rigidly fixed, an interest difference would be the sole means of attraction; the more widely exchange rates can vary, the less the importance of interest margins, the greater the importance of possible exchange profits. "Widening the gold points" is therefore a policy which reduces the need for interest rate manipulation in the working of the gold standard. The pre-war gold policy of the Bank of England, as described by Mr. Sayers and Professor Beach, amounted to raising the selling price of gold at certain times, so as to lower the gold export point and give greater scope for *inward* equalising capital movements, and to raising the buying price of gold at other times, so as to lower the gold import point and narrow the opportunity for *outward* equalising capital movements.

Equalising capital movements may also be provided directly by the monetary authorities. Even in pre-war days this was done to some extent, certain central banks holding stocks of foreign exchange assets, by varying the amount of which they could equalise demand and supply in the exchange market. In recent years, of course, operations of this kind have been undertaken by Exchange Equalisation Funds.

The thesis that a movement of short-term capital has deflationary effects in the borrowing country, inflationary effects in the lending country, has more justification in the case of these equalising movements and can, I think, be shown to be true in some senses. Looking at the matter from the point of view of the circulation of money, in the borrowing or deficit country the money which with an even balance of payments would have passed from one section of its traders to another (e.g., from importers to exporters) passes into the disposition of foreign financiers or their agents, and is either held completely liquid, awaiting the favourable turn in the exchange market, or at best is invested in the central money market. There is therefore a diversion of the flow of money from the industrial circulation to the financial circulation, which may be expected to be deflationary. Obversely, in the lending country there is the opposite tendency for money to be released from the financial to the industrial circulation.

The view that these movements of capital have such deflationary or inflationary effects should only be accepted, however, subject to certain reservations or restrictions of meaning in the case of countries on the gold standard. In the first place, inasmuch as the capital movements are substitutes for gold movements, there is merely a substitution of one kind of deflationary or inflationary change for another —and I think one may say a substitution of a less drastic for a more drastic change. In the second place, in the case of balance of payments disequilibrium I should not always regard the monetary changes as the primary cause of inflation or deflation. For example, if a country suffers an adverse movement in its balance of trade as the result of a change in the direction of demand, I should call this change in demand the primary deflationary factor. As Mr. Harrod has shown, in the absence of money balances this change in demand would of itself suffice to reduce incomes in the deficit country until the balance of payments was restored.[1] With money balances in use, however, people are able to spend more than their currently earned income by drawing on their monetary reserves; and this release of money tends to maintain incomes and prevent the restoration of the balance of payments. Hence, with exchange rates stabilised, the final adjustment to a new equilibrium is only reached when the quantity of money has been contracted (either through gold flows or the contraction of bank credit) to correspond with a lower level of incomes. What I have called the primary deflationary factor is only effective, therefore, if it is supported by these monetary changes. If now in association with equalising capital movements, there occurs an immobilisation of money, a diversion of money from the industrial to the financial circulation, this for the time being supports the primary deflationary factor in the same way, by offsetting the release of other balances.

This reasoning, it will be seen, does not deny that the inflow of equalising loans may be associated with deflationary effects; rather it denies that this is a separate, additional deflationary factor, and it shows that these effects are part of a corrective process rather than uncalled-for disturbances.

The foregoing discussion relates to gold standard conditions, in which it may be assumed that it is the definite policy of the authorities concerned to maintain exchange rates stable within narrow limits. If on the other hand we have a system of independent currencies, and the general policy is to preserve autonomy in the national price and income structures, allowing international adjustments to take place through movements in exchange rates, then equalising capital movements which tend to hold the exchange rates firm and throw the burden of adjustment on to the price and income structures, may be said to be separately and unequivocally deflationary or inflationary in their effects.

4. The same is to be said of the capital movements of my fourth and last main class, movements of refugee capital. This class covers all cases where capital is moved temporarily abroad for safety, whether the danger feared at home is currency depreciation, bank failures or "confiscatory" taxation. What is sought essentially is *liquidity* in a foreign

---

[1] *International Economics*, p. 110. The case in which the balance of payments deficit is due to an autonomous expansion of demand at home differs somewhat from that considered above. The change in the trade balance still exercises a deflationary influence: in short, it reduces the value of the "investment multiplier." But it cannot be expected to be self-correcting in this case, when abstraction is made from the monetary phenomena.

currency—and this serves to distinguish " refugee " movements from " investment " movements, in which risk always plays some part.

Under gold standard conditions, the flight of capital from one country to another will almost certainly lead to a movement of gold in the same direction. The influx of gold in the country receiving the capital presents a problem in so far as it threatens an expansion of money, credit and incomes which may have to be reversed later, on the occasion of the withdrawal of the capital. The solution of the problem is found in the sterilisation of the incoming gold. This presents no difficulty in principle apart from the direct cost to the central bank (through the substitution of gold for earning assets) or the government (cost of borrowing to purchase gold).

In the absence of the gold standard, the problem is different and rather more complicated. In this case a net movement of capital (as distinct from an exchange of claims in each other's currency between nationals of different countries) can only take place to the extent that there is a change in the balance of trade. Through movements in the exchange rates, the country losing capital must develop an export surplus, the country receiving the capital an import surplus. In the home markets of the latter (receiving) country, there will then be an increased supply of goods without a corresponding increase in demand. For in contrast to what may be termed a normal movement of capital, this movement of capital is not made in response to an investment demand, and the money acquired by the capital exporters abroad is more likely to pass into the financial circulation than to be spent on new capital outlay. In short the same deflationary situation is produced as in the case of the adverse balance of payments discussed in the case of equalising capital movements; but whereas in that case both the capital movement and the deflation were the result of the change in the balance of trade (due to a change in international demands) in this case the capital movement is the cause of the deflation and the adverse trade balance.

It might be possible for the monetary authorities of the country to which the refugee capital flows to bring about an expansion of investment at home equivalent to the capital inflow. But the fact that the capital is only available temporarily and possibly for a comparatively short period, makes this course dangerous. It remains for the authorities to offset this inflow of unwanted capital, either by acquiring foreign money to balance the foreign acquisition of home money—in which case there is no net import of capital—or by purchasing gold to balance the inflow of capital (or other imports might be bought, e.g., stocks of materials as suggested by Mr. Keynes in his recent paper to the British Association). This offsetting of capital movements has become at least as important a part of the work of Exchange Funds as the provision of equalising capital movements.

The offsetting of the inflow of refugee capital avoids any deflationary effect through an adverse change in the balance of trade. Either there is no net import of capital, or if there is it is balanced not by a change in ordinary commodity trade but by a movement of gold (or by special imports in Keynes' proposal). But it remains to be considered whether there may not still be a deflationary effect resulting from the way in which internal monetary circulation is influenced.

The answer depends partly on how the foreign capitalists dispose of the money of which they have obtained control, and partly on how the situation is dealt with by the domestic banking system. There need be no disturbance at all if, to take the simplest case, the foreign capitalists invest in the Treasury Bills with which the Exchange Fund is financing its operations. The result will be equally satisfactory if the foreign capitalists hold bank deposits and these deposits are additional to the supply which would otherwise exist, that is, if the banks purchase the Treasury bills issued by the Fund as additional assets. This will lower their reserve ratio, however, and although the especially liquid character of the Treasury bills acquired may be held to justify some lowering of the cash proportion, it is probable that a sufficient expansion of deposits would be conditional upon an increase of reserve assets (bankers' cash) on the part of the central bank. Finally, if the banks (or for that matter the general public) purchase the Treasury bills sold by the Fund in place of other assets, so that the foreign capitalists acquire part of the existing supply of deposit money, it is necessary that these deposits should be invested if a deflationary effect is to be avoided, although since the money (deposits) was probably drawn from the financial circulation, it will suffice if it is invested in the same sphere. The view that the acquisition of home money by foreigners will be deflationary unless the authorities make possible an expansion of the supply of money, is based on a presumption that the foreigners will hold idle deposits.

To summarise the foregoing argument with respect to my four main classes ; the first two classes in no way involve deflation in the receiving country ; the third class is associated with deflationary effects in the receiving country, but only imports a separate deflationary force in the case in which the equalising capital movement prevents adjustment through exchange depreciation ; the fourth class is definitely deflationary unless offset.

It is not claimed that these four classes are exhaustive, but they cover, I submit, an important part of all short-term capital movements and present interesting contrasts.

Moreover, the foregoing analysis provides a framework into which capital movements originating in other ways can be fitted. This will be shown with reference to two other kinds of short-term capital movement.

5. *Movements of capital to take advantage of a Stock Exchange boom in another country.* In practice it may sometimes be difficult to determine whether the capital is being moved temporarily to take part in speculation or permanently for investment, and it is only with the first case that we are here concerned. But putting aside this difficulty, it can be said that in so far as the speculation leads to additional real investment, the technical effects of the capital movement are much the same as those of my first class. (It is not denied, of course, that the kind of investment which results may be less desirable.) On the other hand, to the extent that the speculation expands the financial circulation and not real capital outlay, the effects of a speculative capital movement approximate to those of refugee capital.

6. *Changes in foreign balances held as monetary reserves.* Changes which follow alterations in the balance of trade (because of changes in demand) serve immediately as equalising capital movements and have the advantage of being more permanent in their inflationary or deflationary effects than other equalising capital movements. On the other hand, if the authorities of an exchange standard country (e.g.) decide to strengthen their reserve position (acquire liquidity abroad) or if the exchange standard system is newly adopted, the effect on the country where the balances are acquired is likely to be the same as that of an influx of refugee capital.

Capital Intensity and the Trade Cycle[1]

By Nicholas Kaldor

1. That the Trade Cycle is chiefly characterised by undue periodic "lengthening" of the period of production is the well-known tenet of the contemporary Austrian School.[2] According to this theory, credit expansion, through its effect on the structure of interest rates, leads producers to adopt methods of production which are more "roundabout"; the profitability of these methods can only continue, so long as the process of credit-expansion continues (or, at any rate, so long as the interest rate does not rise): once it ceases an attempt will be made to return to less capitalistic methods which necessitates a painful process of readjustment. Thus the real cause of the depression is the malinvestment of capital undertaken during the boom; and under the term "malinvestment" the adherents of this theory understand not investment for the wrong purpose but investment in the wrong form—not that the instruments of capital created produce unwanted goods, but that they can only produce these goods in an unwanted way.

This theory has been attacked in recent years from two different ends—from the trade-cycle end and from the capital-theory end. On the one side it has been recognised by an increasing group of economists that the important variations during the trade cycle are variations in the general level of activity—in the level of incomes, of production and employment—and in comparison with the overriding importance of these the changes in the methods of production, on which the Austrian theory concentrated its attention, must be insignificant. On the other side, the Jevons-Böhm-Bawerkian theory of capital, on which the Austrian trade-cycle theory purports to be based, has been subjected to searching criticism by a group of writers, chiefly by Professor F. H. Knight. It has been contended that quite apart from its application to the trade cycle the main principle of this theory that the accumulation of capital involves a " lengthening " of the investment period, is false and unwarranted; and, moreover, the meaning of the investment period concept itself is subject to grave doubts.

---

[1] The writer is indebted to Miss M. F. W. Joseph, Mr. W. M. Allen and Mr. T. Scitovszky, who have read this paper in manuscript, for suggestions and criticism.

[2] Under "Austrian School" we mean chiefly the writings of Professors Mises, Hayek, Strigl and Machlup. English readers are familiar with the theory chiefly through Professor Hayek's *Prices and Production.*

As a result of these developments the danger, at the moment, is that too little, rather than too much, attention is being paid to the question of variations in methods of production during the trade cycle and what significance is to be attached to them. For the fact that the Austrian theory of the trade cycle started off on what now appears to be the wrong track has rather distracted attention from the possibility that insufficient or undesired changes in the methods of production during a boom can be a potent source of disequilibrium. It is the purpose of the present paper to re-examine this problem. Our enquiry falls into two main parts. In the first part we shall examine what meaning, if any, can be attached to the investment period concept in view of the attacks launched against it; and how this " investment period "—i.e. the method of production actually chosen by producers—is determined. In the second part we shall investigate the behaviour of capital intensity during the cycle, and the causal significance of this behaviour, i.e. how far, and in what ways, the actual methods of production adopted are consistent with those required for a steady rate of progress. We shall find that the changes in the degree of roundaboutness are by no means causally unrelated to cyclical fluctuations; but that in so far as there is " malinvestment " during a boom, it is of a very different character from that contemplated in the theories of the Austrian School.

I.—The Determination of Capital Intensity

2. The first question—whether there is any meaning in the investment period concept—has given rise to an extended controversy on which the present writer has already expressed his views in two earlier publications.[1] Here it will be sufficient to indicate certain results which seem to emerge from that controversy. It appears, in the first

---

[1] " Annual Survey of Economic Theory: The Recent Controversy on the Theory of Capital," *Econometrica*, July, 1937, and " On the Theory of Capital: A Rejoinder to Professor Knight," *Econometrica*, April, 1938. Cf. also Knight, " On the Theory of Capital: In Reply to Mr. Kaldor," *Econometrica*, January, 1938.

place, that the quantity of capital, employed by a firm, or the economic system as a whole, can be measured, or expressed, in terms of an " investment period " only under certain assumptions regarding the technique of production, assumptions which are so restrictive as to deprive the concept of any practical value.[1] It appears, secondly, that given these assumptions the investment-period concept provides no more than a measure of the ratio of capital to labour in production ; and even so, it is merely one of several ways of measuring this ratio.[2] And it appears, finally, that the objections which invalidate the investment period concept by no means impair the validity of this ratio[3] ; hence the purposes (or at any rate some of the purposes) for which the concept of the " investment period " was intended, might be served equally by some other measure of the ratio of capital to labour. It will be better, therefore, to drop the expressions " investment period ", " period of production ", or " amount of waiting " altogether and substitute some less ambitious term, such as the " degree of roundaboutness of production ", or the " degree of capital intensity ".

It still remains to show how these terms can be defined. For capital—real capital—consists of heterogeneous, not of homogeneous, objects, which themselves embody labour and which periodically have to be renewed or replaced ; hence the meaning of the ratio between capital and labour, as factors of production, is not so immediately obvious, as, say, the ratio between factor A and factor B, where both these factors are viewed as a collection of physically homogeneous units.[4] In fact, there is no absolute, or unique, measure of this ratio. But one can conceive several " indices " which give an " ordinal " measurement of it—i.e. which enable us to say whether the ratio has increased or diminished, even if the exact quantitative magnitude of the change registered by a particular index may have no special significance. Such an index is the ratio between "initial cost" and "annual cost" involved in the production of a certain stream of output.[1] In planning an investment, entrepreneurs expect a certain prospective stream of net receipts, which is obtained by deducting from the gross receipts, obtained from the sale of its planned output, the corresponding stream of expenditures. It is generally possible to reduce the size of the expenditure-stream, per unit of receipts-stream (i.e. per unit of output), by increasing the initial outlay (the size of the investment) per unit of output. Hence the relation between initial outlay and annual outlay can be regarded as a measure of the proportion in which "capital" and "other factors" are combined in a particular productive unit, i.e. of its "capital intensity" of production.[2]

---

[1] *Econometrica*, January, 1938, p. 65, and *ibid.*, April, 1938, p. 166.

[2] *Ibid.*, April, 1938, p. 169.

[3] This, it seems, is admitted by Professor Knight himself, who thinks, however, that since it cannot be measured with " any high degree of accuracy ", its use should be avoided " in work pretending to a scientific character " (*loc. cit.*, p. 82).

[4] Moreover, " labour " is looked upon as a flow of productive services, measured by integrating this flow over an interval of time (man-hours), whereas " capital " is regarded as the source of the flow of productive services, i.e., as concrete goods. This is partly because the services of capital goods are not always easily measurable, and partly because, in a non-slave economy, only the services of labour can be exchanged, and not (as in the case of capital goods) the sources of these services.

For a going concern, whose capital is already installed, the "initial cost" is not, of course, the actual cost of the equipment incurred in the past, but its replacement cost at current prices; while its "annual cost" could be either (*a*) its actual rate of expenditure in connection with the output which it is actually producing; or (*b*) its "normal" rate of expenditure, associated with the rate of output which corresponds to the normal capacity of the equipment.[3] Hence we can distinguish between the "actual" and the "normal" capital intensity of a certain productive unit. The former can vary with variations in the amount of labour and raw materials employed in connection with a given equipment, but the latter can only be varied by changing the type of equipment in use. In the case of a new investment (equipment planned or under construction) we can only speak of course of its normal capital intensity.

---

[1] The other indices one could adopt are the ratio of the value of annual output to that of annual input, the ratio of interest costs to wage-costs (per unit of output), or the ratio of initial cost to the value of (annual) output. All these have been proposed by various writers. They all suffer, more or less, from the deficiency that if the relative prices between input and output units change, or the rate of interest changes, the indices will register variations though no change has occurred in the real structure of production. Hence they have to be corrected for such price changes. With the index suggested in the text, this deficiency is partially eliminated, since this only assumes the prices of (newly produced) equipment goods in terms of labour as given. This latter price ratio is, perhaps, less subject to variation, at any rate over short periods, than the prices of final goods relative to wages, or the rate of interest. (The price of raw materials enters both in the "initial cost" and the "annual cost" of output. But they are not, or not necessarily, the same kind of raw-materials; hence a change in the price-relation between different kinds of raw-materials will also affect our index.)

[2] For a fuller elucidation of this concept, and of the meaning of the terms "initial cost" and "annual cost", see *Econometrica*, July, 1937, pp. 212 ff.

[3] The output which corresponds to the normal capacity of the equipment is not necessarily the same output which gives minimum average costs, since under a régime of imperfect competition, normal output need not be the same as the optimal output. Rather, it should be regarded as the rate of output in the expectation of which the particular equipment was planned.

For an individual firm therefore the degree of capital intensity of production can be defined with sufficient accuracy. It is more questionable whether we can measure in the same way the capital intensity of society as a whole. This would depend on the ratio of the replacement cost of the whole social capital to the annual labour income[2]: and the " replacement cost of the whole social capital " is a concept of more than doubtful validity. But there is no need for any such concept. Changes in the capital intensity of production in general are the outcome of changes in the methods of production employed by individual firms ; and in so far as different firms are subject to the same influences, any generalisations made about the behaviour of the " typical " or " representative " firm will be applicable, *mutatis mutandis*, to the system as a whole.[3] It will be quite sufficient, therefore, to concentrate our attention on the behaviour of the representative firm.

3. Increasing the degree of (normal) capital intensity thus implies the installation of superior equipment, with a greater labour-saving capacity. (Theoretically it can imply savings in raw materials as well ; but the technical possibilities in this direction are pretty limited.) This is possible in two ways : either by the installation of more " automatic " equipment, which requires less " co-operating labour " per unit of output, or by the use of more " durable "

---

[1] In the subsequent analysis we shall be mostly concerned with the latter, i.e., the capital intensity adopted on new investments.

[2] For an individual enterprise, the " annual outlay " includes, in addition to the cost of the labour directly employed, the price of raw materials, etc., bought from other firms and the charge for maintenance and replacement. For a closed system, as a whole, however, this item consists entirely of labour costs. For all inputs other than labour must be the output of some other firm ; hence these other inputs cancel each other out when the outputs and inputs of all firms are added together.

[3] It might be objected that changes in the capital intensity for the system as a whole need not necessarily involve corresponding changes in the methods of production adopted by individual firms : since the change might take the form of a relative expansion in the output of those goods which contain more capital rather than a change in the methods by which output is produced. But this is not so. It is true that any change which makes it profitable to use more capital per unit of output will at the same time reduce the costs of production of those goods produced with much capital relatively more than the costs of those containing less capital. Hence an expansion of the capital intensity of individual firms will, *ceteris paribus*, be accompanied by a relatively greater expansion of the more capitalistic firms : thus making the changes in capital intensity for the system as a whole rather more pronounced than might be inferred from the changes in capital intensity of the representative firm. But the two movements cannot go in opposite directions ; nor could there be a change in the first in the absence of the second, unless there were an independent change in the relative demand for different types of consumption goods, at the same time.

equipment, which requires lower amortisation (hence less "invested labour") per unit of output. In practice, the first method is of predominant importance; although in more primitive communities there are large possibilities of cost-saving in the second direction as well.[1]

Greater economy of labour, per unit of output, can only be achieved, of course (given technical knowledge), by a greater expenditure of capital per unit of output. Hence the higher the degree of capital intensity adopted, the smaller is the actual productive capacity created by a given amount of investment.

4. What determines the optimum degree of "capital intensity", i.e. the degree of labour-saving capacity of the equipment actually adopted? On closer examination this question turns out more intricate than one would at first suppose; it is seen to depend largely on the type of market-imperfection with which an individual firm is confronted.

The type of equipment chosen can be assumed to be the one which maximises the producers' profits, after deduction of interest charges, including the necessary reward for risk-bearing (of lenders and borrowers).[2] It is usual to express this condition by saying that the marginal efficiency of capital, in equilibrium, must be equal to the marginal cost of borrowing (i.e. that the additional profit on the last unit of capital invested equals the additional cost of employing that unit). But it is easy to show that this condition can tell us nothing as to the method chosen; for the simple reason that equality of marginal efficiency and marginal cost can be reached, not with one method alone, but with any method. In other words, although the firm is confronted, under given conditions, with only one supply curve (of capital), it is faced, on the other side, with a whole family of marginal-efficiency curves; or, more precisely, with as many marginal-efficiency curves as there are methods of production available. (In Fig. 1 the curve SS stands for the schedule of marginal supply prices, including risks: the curves D_1, D_2, D_3 the marginal efficiency curves corresponding to different alternative methods of production.) To determine the method actually chosen we need the additional condition that the area enclosed by the relevant marginal efficiency curve (representing the method chosen) and the marginal supply curve must be a maximum.[1]

---

[1] Cf. John Rae's illuminating description of the inferior durability of instruments used by the Chinese, in *New Principles of Political Economy*, pp. 151 ff. In a modern industrial community, technical progress and consequent risk of obsolescence of plant, forms a serious obstacle to further cost-saving through the installation of more durable machinery.

[2] Mr. Keynes is inclined to treat the reward for risk-bearing (borrowers and lenders) as a deduction from the expected profit, i.e., from the marginal efficiency of capital (*General Theory*, Ch. 11). This is quite a legitimate procedure; but for our purposes (for reasons which will become obvious) it is more convenient to treat risk as an addition to the supply price of capital. In so far as a particular method of production involves risks which are peculiar to that method, these should be treated as a deduction from the expected profit on that method; but risks which are common to all methods should be regarded as a factor limiting the supply of funds; even if the risk implies an unwillingness to borrow, rather than to lend.

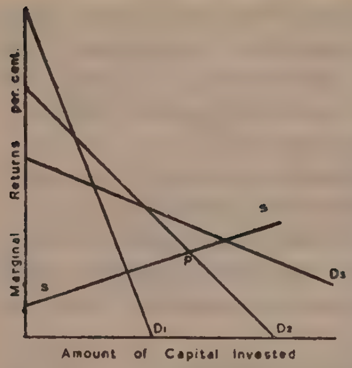


FIG. 1.

Before proceeding further it is necessary to say something about the shapes of these curves. Under a régime of perfect competition in the markets for products and for factors, and in the absence of economies and diseconomies of scale (i.e. that an increase of *all* factors in a given proportion leads to an equi-proportionate increase in output), the marginal efficiency curves must all be horizontal: for under these conditions the *rate* of profit earned must be independent of the scale of investment. (In this case, therefore, the optimum degree of capital intensity can be expressed by the simple condition that the *rate of return per unit of capital invested* must be a maximum—i.e. that method will be chosen which corresponds to the highest marginal efficiency curve.[2])

Thus apart from the case of technical diseconomies of scale, the existence of which is doubtful and can therefore be ignored, the cause of falling marginal efficiency curves[3] to the individual firm is to be sought in falling demand curves for the products and/or rising supply curves for its factors.[4] Since these causes operate equally whichever method is chosen the family of marginal efficiency curves all follow the same general tendency: they are all falling in the one case, and they are all horizontal in the other.[1] But in the case where they are falling they do not all fall equally fast. For the more capitalistic a particular method is, the greater is the amount of capital required per unit of output and per unit of annual input, hence the less is the rate at which its marginal efficiency is falling with an increase in investment.[2] (In Fig. 1, therefore, the curve D_3 can be regarded as the one corresponding to the most capitalistic method, and D_1 to the least capitalistic.) A method therefore which gives the highest average rate of return for a *small* amount of capital invested may yet be inferior, if, under given conditions of capital-supply, it gives a smaller aggregate of profits than another method.

---

[1] In Fig. 1 the relevant marginal efficiency curve is D_2 and P is the equilibrium point.

[2] These assumptions underlie Wicksell's theory. (*Lectures*, Vol. I, pp. 172 ff. and Appendix 2 (B).) He always assumed that the condition of maximum average return is sufficient to determine the method of production adopted by the firm.

[3] The opposite case of *rising* marginal efficiency curves to the individual firm can, I think, be ignored altogether: since even if there are increasing (physical) returns to scale, *value returns*, in the neighbourhood of equilibrium, are unlikely to be increasing.

[4] Under the term "factors" we do *not* include, of course, loanable funds.

The supply curves of investible funds, on the other hand, will be rising if the firm's own capital is limited and its ability to borrow in the market is limited, or if the entrepreneur's willingness to invest his own funds (or borrowed funds) in his own enterprise declines with an increase in the investment (in other words if his own marginal risk premium is rising[3]). In so far as the limitation is due to the first two causes and not the third, the increase in supply price will be discontinuous, rather than continuous, and the curve can be horizontal over a certain range.

It is possible therefore that either the family of marginal efficiency curves or the schedule of the marginal cost of borrowing should be horizontal; but since the firm's scale of operations must be limited by something, they cannot both be infinitely elastic at the same time.[4] And the answer to our question: what determines the optimum degree of capital intensity depends on which of these curves is horizontal, or more nearly horizontal.

This is best shown by considering certain limiting cases.

---

[1] Horizontal marginal efficiency curves to the firm need not imply that the marginal-efficiency schedule to the system as a whole is horizontal. The latter can be falling because for the system as a whole, though not for the firm, the prices of newly produced capital goods are a rising function of the scale of investment.

[2] This proposition will only necessarily hold for linear demand and supply functions. The slopes of the marginal efficiency-curves are determined by the slopes of the marginal revenue curve for the product and the marginal cost curves for the factors and the faster marginal revenue falls (and/or marginal cost rises) with an increase in investment, the faster will the marginal efficiency curve descend. In practice, only the case of a falling demand curve for the firm's product is important; the case of rising supply curves of labour or raw materials (monopsony) is less frequent.

[3] Cp. Kalecki, "The Principle of Increasing Marginal Risk," ECONOMICA, November, 1937.

[4] This problem, curiously enough, never troubled Wicksell. He was content to say that the entrepreneur will maximise the rate of profit on the investment; but he did not consider what determines in this case the scale of his investment. He must have assumed that each entrepreneur invests his own funds and does not (or cannot) borrow from others.

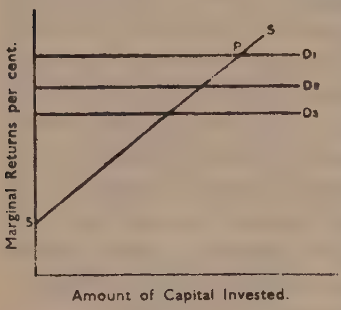


FIG. 2.

(1) If we take the case considered by Wicksell, i.e., perfect competition in all markets with the exception of the capital market, where the marginal efficiency curves are horizontal and the supply curve of capital is rising (Fig. 2), the optimum degree of capital intensity depends on the relation of output prices to input prices[1]: or, as we might say (on the simplifying assumption that output consists of consumption goods and input of labour), on "real wages".[2] For a rise in real wages (i.e. a fall in output prices relative to input prices) will reduce the rate of return (i.e. the marginal efficiency) on the less capitalistic methods by more than on the more capitalistic methods; hence, after the rise in real wages the method with the highest rate of return will be one with a higher degree of capital intensity than before.[3] (This follows from the simple propositions that (*a*) in order that profits should be maximised, the rate of real wages must be equal to the marginal productivity of currently employed labour; (*b*) a rise in the marginal productivity of current labour must involve an increase in the proportion of embodied labour to current labour, i.e. of initial cost to annual cost, per unit of output.) Given the supply schedule of capital, the rise in real wages will also reduce the scale of investment (and hence the scale of planned output still more). A fall in real wages will reduce the degree of capital intensity and increase the scale of investment (and hence will augment the scale of planned output still more). Given the level of real wages, a shift in the supply curve of capital to the right (which can be due

---

[1] Or more precisely: on the relation of expected output prices and expected input prices. We assume however, here and in the following, that entrepreneurs' price-expectations are governed by ruling prices.

[2] By the term "real wages" we mean, here and subsequently, wages in terms of the firm's *own* product. It is thus merely a convenient shorthand expression for the relation between the prices of the firm's product(s) and factor(s) and is not necessarily the same—in so far as firms are producing other than wage-goods—as real wages in the ordinary sense.

[3] Cf. Wicksell, *op. cit.*, pp. 173–179, 278–279. The proposition only holds if we assume that future, as well as current, factor-prices rise in terms of the product. A rise in current factor-prices (relative to expected product-prices) which does not carry with it a similar rise in factor prices in the future (e.g., a rise in the construction cost of new equipment which is expected to be temporary, and hence does not affect expected amortisation-costs) will reduce the rate of return, but it will leave the relative profitability of different methods unaffected.

either to a reduction in the market rate of interest or to an increased willingness to bear risks) will lead to an increase in the scale of investment and hence an increase in planned output (until the marginal cost of borrowing, in the new equilibrium, is the same as it was before), but it will leave the degree of capital intensity adopted unaffected. In this case, therefore, the rate of interest (i.e. the supply schedule of capital) merely affects the scale of investment, while "real wages" (i.e. the relation of product prices to factor prices) determine the method adopted.

(2) If we take the opposite limiting case of imperfect competition in the product market and perfect competition in the capital market, where the marginal-efficiency curves are falling and the supply curve of capital is infinitely elastic (Fig. 3), the method of production adopted depends entirely on the rate of interest (i.e. the rate at which the firm can borrow), while the relation of output prices to input prices (i.e. of the demand curve for the product relatively to the supply prices of the factors) merely affects the scale of investment. It still remains true in this case that a shift in the demand curve for the product, relative to the prices of factors, will affect the relative profitability of different methods, for any *given amount* of capital invested. But if the supply curve of capital is horizontal, this is irrelevant: for such a shift cannot affect the order, with respect to size, of the areas enclosed by the marginal-efficiency curves and a horizontal line[1]; it cannot lead to a change in the method which yields maximum aggregate profits. Hence a fall in real wages will increase the scale of investment (until *marginal*

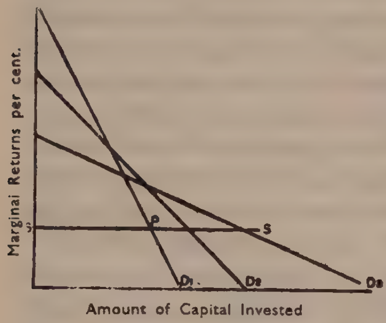


FIG. 3.

---

[1] In the above Fig. 3 a fall in the demand curve for the product would shift the D-curves to the left, and change their relative slopes at the same time in such a way that (i) the point where the D_1-curve (corresponding to the least capitalistic method) cuts the ordinate is reduced proportionately *more* than the corresponding point on the D_2 curve and this in turn more than the corresponding point on the D_3 curve; (ii) the point where the D_1 curve cuts the abscissa is reduced proportionately *less* than the corresponding point on the D_2 curve, and so on. These two tendencies offset each other's effect so that the *order of the areas with respect to size* (though not their numerical relation) enclosed by the D-curves and the abscissa (or any other line parallel to the abscissa) remains the same. In the case where the D-curves are horizontal, they only cut the abscissa at infinity, so that only the first tendency will be operative but not the second.

real wages[1] in the new equilibrium are the same as before), but it will leave the method of production adopted unaffected. A fall in the rate of interest, on the other hand, will lead to an expansion of the scale and an increase in capital intensity.[2]

These two cases are therefore exact counterparts of each other. In both cases both a fall in the rate of interest (i.e. a shift in the supply curve to the right, or, in the case of infinitely elastic supply, a fall in supply price), and a reduction in " real wages " (i.e. a shift in the demand curve for the product to the right, or, in the case of infinitely elastic demand, a rise in the product price) will involve an expansion of the scale of investment and of the scale of planned output, and *vice versa*. But the degree of capital intensity depends in the one case on the level of real wages alone, and in the other on the rate of interest alone.

These conclusions can also be reached in the following way. In a state of equilibrium the marginal cost of borrowing must be equal both to the marginal efficiency of capital and the marginal productivity of " capital intensification ".[3] This latter marginal productivity is invariant with respect to the level of real wages; since any change in real wages —provided it affects the cost of " embodied labour " and " current labour " equally—must affect the numerator and the denominator of this expression in an equal manner.[4] On the other hand, the marginal cost of borrowing, in equilibrium, must also be equal to the marginal efficiency of capital and a given value of the marginal efficiency will be uniquely associated with a given level of marginal real wages.[1] Hence given *either* the marginal cost of borrowing *or* the level of marginal real wages, at the position of equilibrium, the optimum method of production is also determined. (In other words, equilibrium requires that the marginal cost of borrowing and marginal real wages should stand in a certain relation to each other.) But if the marginal efficiency curves are horizontal (i.e. real wages are independent of the scale of planned output) the scale of investment will be pushed to the point where the marginal cost of borrowing conforms to the standard set by the marginal efficiency of capital (on the method of production whose marginal efficiency is highest), that is to say, to the standard set by the level of real wages ; while if the marginal cost of borrowing is constant, the scale of planned output will be pushed to the point where the marginal efficiency of capital (and hence marginal real wages) conforms to the standard set by the cost of borrowing.

---

[1] The term " marginal real wages " is used here to denote the ratio between the marginal revenue of output and the price of input.

[2] It was pointed out to me by Mr. W. M. Allen that in the case of imperfect competition in the factor markets, the optimum degree of capital intensity will, in addition, also depend on the elasticity of supply of factors.

[3] The " marginal productivity of capital intensification " (which corresponds to Jevons' concept of the " marginal productivity of waiting ") should be defined as the ratio between the increase in profits (per annum) and the increase in the amount invested, when the *scale of planned output* is assumed to be given. The marginal efficiency of capital, on the other hand, is the ratio between the increase in profits (per annum) and the increase in the amount of capital invested, when the *method of production adopted* (the degree of capital intensity) is assumed to be given.

[4] Let the output of a certain commodity x be $F(C, a)$ where C is the " initial cost " and a the " annual cost " of x, the marginal productivity of capital intensification will be $\dfrac{\frac{\partial x}{\partial C}}{\frac{\partial x}{\partial a}}$

Any change in prices which affects C and a equally will leave the term unchanged. (I am indebted on this point to a correspondence with Mr. R. F. Harrod and to certain discussions with Mr. E. Rothbarth.) The proposition also assumes that the elasticity of supply of factors, to the individual firm, is infinite and that the value of existing capital goods is not lower than the supply-price of newly produced capital goods (of the same technical capacity). On this latter point cf. note 2, p. 59 below.

The "typical firm" in the real world is probably one whose marginal efficiency curves are falling, and whose supply curve for investible funds is rising. Hence the degree of capital intensity will be affected both by changes in the rate of interest (or the facility for borrowing) and changes in the expected price-relationships. But which of these two factors will have the predominant influence will depend on the relative elasticities of the curves. If the marginal supply curve of capital is elastic, relatively to the marginal efficiency curves, the influence of the rate of interest will be dominant, and *vice versa*. This is merely another way of saying that the answer to our question ultimately depends on the nature of the forces which limit the scale of investment of the representative firm. If this scale is limited chiefly by the limitation of the firm's output-market, by the amount the firm expects to be able to sell, the rate of interest will be the important factor ; if it is limited chiefly by the scarcity of funds at its disposal, the main influence will be the level of prices, relatively to wages.[2] And it must not be forgotten that the "limitations in the size of funds" can be due not only to inability to borrow but also to increasing unwillingness to take risks on the part of the entrepreneur himself.

---

[1] This will be strictly true only if constant returns to scale are assumed. The complications arising out of increasing returns to scale cannot be gone into here.

[2] In practice this implies that the rate of interest will be the more important factor for the large monopolistic concern ; and the level of real wages for the small and medium-sized business.

Moreover, the less is the influence of either factor on the method of production adopted, the greater will be its influence upon the scale of investment, and *vice versa.* (This should be obvious merely from considering the diagram.) Hence if a change in the rate of interest, or in the willingness and facility of borrowing, leads to a wide shift in the scale of investment, this makes it *a priori* probable that the situation is of the Wicksell type, where the influence of real wages is dominant; while if a change in profit-expectations (a shift in the marginal efficiency curves) causes a wide shift in investment, this makes it probable that the situation is of the opposite type, where the influence of the rate of interest is dominant.

The assumption on which this analysis is based is that the willingness to assume risks varies with the amount of capital invested, rather than with the scale of planned output.[1] If borrowers' and lenders' risk varied with the size of potential output, rather than the size of capital invested, marginal risk should be treated as a deduction from the individual marginal efficiency curves, and not as an addition to the rate of interest (i.e. the supply price of capital), in which case the supply curve is necessarily horizontal and capital intensity would depend solely upon the rate of interest in all cases.

All this has referred to the determination of what we defined as the "normal" capital intensity of production: i.e. the degree of capital intensity chosen on new investments. The *actual* capital intensity of production—i.e. the proportion in which labour is combined with already existing equipment—depends of course entirely on the relation of selling prices (or demand curves) to costs.

II.—CAPITAL INTENSITY AND THE TRADE CYCLE

5. We can now turn to the question of how capital intensity varies in the course of the Trade Cycle. The Trade Cycle may be regarded as a cyclical variation in the scale of current production and in the scale of investment undertaken by the representative firm, accompanied by

---

[1] This assumption appears certainly justified in the case of lenders' risk; and I think it applies, at any rate to a large extent, to borrowers' risk as well.

variations in the prices of finished products in terms of wages and in the rate of interest. While all these movements are, on the whole, positively correlated, the fluctuations in the scale of investment are greater than the fluctuations in current output[1]; while the variations in real wages are normally greater than the variations in the rate of interest (i.e. of the pure long-term rate, as measured by the yield of gilt-edged securities). Without entering now into the causes of these cyclical variations, we can apply the preceding analysis to these facts.

(*a*) Since prices rise relatively to wages during the boom, and fall during the depression, the *actual* capital intensity of production (as above defined), both in the consumption goods industries and in the investment goods industries, must fall during the upswing and rise during the downswing. This, in fact, is no more than an elaborate way of saying that the volume of current production fluctuates. For in the short period, when equipment is largely given, producers can only increase the rate of production by increasing the rate of employment of labour relatively to equipment and can only decrease production by doing the opposite.[2]

(*b*) It is much more interesting to inquire, however, what happens to the *normal* capital intensity, i.e. in what way does the character of newly constructed capital vary as between boom periods and depression periods? The same relation appears to hold here also, although this cannot be established with the same certainty.

(*i*) The fact that profits per unit of output are relatively large (i.e. real wages relatively low) and the rate of interest is higher, *at the same time as the scale of investment is large*, should lead one to expect that the capital intensity of investment varies inversely with the scale of investment, i.e. that it is less in boom periods than in depression periods. For, as we have seen, the fall in real wages will stimulate the adoption of less capitalistic methods, unless the schedule of the marginal cost of borrowing, to the firm, is horizontal; the rise in the rate of interest should have the same effect unless the marginal efficiency curves are horizontal. Hence both these factors together should ensure this result irrespective of whether the typical firm in the real world is more akin to firms of the Wicksell-type, or the opposite type. At the same time, the fact that the variations in the rate of interest are relatively small leads one to expect that changes in capital intensity will be more important if firms are nearer the Wicksell-type; while the fact that a change in profit-expectations leads to a *large* shift in the scale of investment makes it more probable that the typical firm is of the opposite type. Hence the changes in capital intensity are not likely to be large.

---

[1] For any particular firm, " current production " and " current investment " can be sharply demarcated from one another. This does not exclude, of course, that the " current production " of one firm—in so far as it consists of the production of investment goods—should be the " investment " of some other firm. Nor is it excluded that for some firms—e.g., the firms in the investment good industries—the variations in production activity should be larger than the variations of (their own) investment activity. But since the level of investment in general fluctuates more than the level of production in general, this cannot be true of the representative firm.

[2] It might be objected that since the variability of technical coefficients is small, the increase in production proceeds by bringing into use equipment previously idle, rather than by employing more labour with the *same* equipment. We ought, however, to regard as the "given equipment" the whole of the equipment at the entrepreneur's disposal and not only that part of it which is, at any time, actually in operation.

(*ii*) There is, however, a third factor which works in the opposite direction. This is the fact that people feel more confident during the boom than during the depression. Thus the necessary reward for lenders' and borrowers' risk, for any given quantity of capital invested, is less; the excess of the marginal cost of borrowing over the market rate of interest, for a given level of investment, is smaller. The supply schedule of capital to the firm is also more elastic.[1]

If this factor occurred in isolation; if, in other words, the rise in investment during the boom were to be explained *entirely* by the increase in confidence (or the increased willingness to bear risks—which comes to the same thing[2]) and not by the rise in profit-expectations, capital intensity would increase with an increase in the scale of investment (unless the marginal efficiency curves were horizontal).

But this is not the case. Though it is not easy to obtain empirical evidence on this matter, it appears more probable that the main factor responsible for the large increase in investment in the upward phase of the cycle is the rise in profit-expectations, while the increase in confidence is more likely to play the rôle not so much of reducing marginal risk as of moderating its rise—associated with an increase in the scale of investment—and thus making possible a greater increase in the rate of investment than would otherwise have occurred.[1]

---

[1] Hence the importance of *not* treating the degree of uncertainty (i.e., the extent of the dispersion around the mean value of expectations) as a simple deduction from the expected profit. Increased profit expectations tend to reduce the capital intensity of investment, i.e., to enlarge the production capacity created by a given investment. Increased confidence in expectations, on the other hand, has the opposite effect; it will lead producers to enlarge the amount invested for the creation of a given productive capacity.

[2] Analytically, one could distinguish between changes in the degree of uncertainty felt and changes in the attitude towards uncertainty, i.e., in the risk premium demanded at a given degree of uncertainty. But since both are purely subjective and both lead to the same behaviour, there is neither any need for the distinction nor any possibility of separating the occurrence of the one from the other.

If, on the other hand, the influence of changes in confidence were regarded as primary, and the influence of changes in expected profit as secondary (i.e. the greater investment activity were chiefly ascribed to a shift in the supply curve, and only to a minor extent to a shift in marginal efficiency curves), this would imply that the typical firm is nearer the Wicksell-type—otherwise a shift in the supply curve would not lead to a *large* increase in investment—in which case real wages will exert a significant influence on capital intensity. Thus if we ascribe the increase in the level of investment to the rise in profit-expectations, capital intensity will tend to fall owing to the increased marginal risk premium which accompanies the increase in the rate of investment and the rise in the interest rate which is associated with the higher level of incomes; if we ascribe it to an increased propensity for risk-taking, it will tend to fall, owing to the fall in real wages which accompanies the increased level of activity in the consumption industries.[2] But, for reasons analysed above, the effect in either case is not likely to be very large.

(*iii*) We have ignored so far the existence of technical progress, i.e. of the invention of new methods of production. New inventions may be regarded as raising the marginal efficiency curves to the industries where they occur (or, rather, to the firms to whom they are available).[3] But they need not raise the different individual marginal efficiency curves (corresponding to different degrees of capital intensity) in the same way. If they are "capital-saving" they will raise more the marginal efficiency curves of the less capitalistic methods of production;

---

[1] I.e., of flattening out the supply curve, rather than lowering it. Moreover, the fluctuations in the willingness to bear risks are probably not wholly positively correlated with investment. Confidence is likely to diminish in the later stages of the boom and revive in the late stages of the depression.

[2] It is only if both factors are similarly important and the one is slightly more important than the other (i.e., the supply curve shifts *rather more* than the marginal efficiency curves) that the net effect might go in the opposite direction.

[3] Which does not exclude, of course, that they may lower, at the same time, the marginal efficiency curves to other firms (or industries).

if they are "labour-saving" they will raise more the marginal efficiency curves of the more capitalistic methods.[1] It is sometimes suggested[2] that while capital saving inventions do occur, the majority of inventions is more likely to be labour-saving than capital-saving. If this is so, then technical progress has the effect of creating a secular (or trend) increase in the capital intensity of production, on which the fluctuations of capital intensity during the cycle are superimposed. The effect is thus analogous to that of a secular tendency of the rate of interest to fall. It implies that the capital intensity of the representative investment in a particular boom will be higher than that of the previous boom. It may even imply—if the rate of invention is very fast—that it will be actually higher than that of the preceding depression. But it does not imply that the tendency towards cyclical variation is thereby superseded, any more than a secular tendency for the rate of interest to fall would, for that reason, eliminate its tendency to fluctuate during the cycle.[3]

We may conclude therefore that the capital intensity of new investment, in the course of the trade cycle, is likely to vary less than the capital intensity of actual production; but, so far as it varies, it is likely to vary inversely with the level of investment. Hence the proposition underlying the Austrian theory of the trade cycle—that the boom is characterised by the adoption of more capitalistic methods of production, and the depression by a return to less capitalistic methods—ought rather to be reversed.[4]

---

[1] Both types of inventions are likely to save both labour and capital, per unit of output. They are defined as labour or capital-saving according as the marginal productivity of either factor is increased *more* than that of the other.

[2] Cf. Hicks, *Theory of Wages*, pp. 125–126.

[3] It is often said that the introduction of new processes is confined to certain periods; some economists suggest that they occur in boom-periods, others that they occur in depression periods. There is little foundation for either view; but it can easily be seen how they are reached. The fact that there is a great deal of new investment during the boom might easily give the impression to the superficial observer that it is a period of rapid technical progress; while the fact that such investments as are undertaken in the depression are likely to be more "capital-intensive" might give a similar impression to observers who are less superficial. There is, in fact, little evidence to show that newly constructed capital embodies more *newly-invented* features in one period than in another.

[4] Professor Hayek was led to his conclusion by considering the variations, in the course of the cycle, of the relative demand for producers' goods and consumers' goods. This, however, is a false analogy from comparative statics. It is only as between different stationary states that this ratio gives any sort of index to the degree of roundaboutness of production. (Even there it is not a wholly reliable index, for capital intensity and the relative demand for producers' goods might change in opposite directions if the change in capital intensity takes the form of an increased durability of goods.) Outside the confines of stationary states, the variations of this ratio merely indicate variations in the level of savings and investments relatively to total income. They give an index to changes in the scale of investment, but *not* to changes in the character of investment.

6. We may now turn to examine the rôle of capital intensity in the causation of the Trade Cycle. As we have seen above[1] the growth of available productive capacity, consequent upon investment, depends on the degree of capital intensity adopted. The larger capital intensity, the smaller the increase in potential output created by a given volume of investment. Hence if the capital intensity of investments falls during a boom period and rises during a depression period, this implies that newly created productive capacity increases faster than the rate of investment during the boom, and falls faster than the rate of investment during depression (at any rate, after a certain initial lag, depending upon the construction period of the equipment goods). If investment activity doubles, the rate of increase of available equipment will more than double.

But this high rate of increase in productive capacity, consequent upon the *failure* of capital intensity to expand, must in itself bring the high rate of investment activity, and thus the boom, to an end, for two reasons: the one, for want of a better name, may be termed " economic ", the other is purely technical in character.

The first reason is that the money demand for consumption goods may, after a time, fail to expand *pari passu* with the capacity to produce consumption goods. This is merely another way of saying that as real income increases the desire to save increases; and in order to maintain full employment (of equipment) in the consumption goods industries, the level of investment activity would have to increase. Hence the less is the increase in capital intensity, the greater is the rate of increase in available real income, associated with a given level of investment activity, and the greater, therefore, the rate of increase in investment activity would have to be in order to enable consumption demand to expand at the same rate at which the capacity to create consumption goods expands. The appearance of unused capacity in the consumption good industries, on the other hand, must sooner or later bring about a collapse of the *existing* demand for investment goods. Thus investment activity has to increase in order to prevent a reduction of investment activity; and the force of this paradoxical situation will be all the greater the *less* is the degree of capital intensity of new investments.

---

[1] Cf. § 3, p. 45.

But even if we assume that this force is inoperative (either because the growth in the rate of investment keeps pace with the growth in savings or because Government policy succeeds in offsetting the increased desire to save by stimulating consumption) investment activity could not proceed beyond a certain point *unless* capital intensity is increased. For quite apart from any insufficiency in the demand for consumption goods, sooner or later excess capacity of equipment must emerge on account of the *scarcity of labour*. In the early stages of the boom, there are generally reserves of unemployed labour available (both in the consumption good industries and the investment good industries) even if the existing capacity of equipment is fairly well utilised. Hence newly created equipment can be brought into production by drawing upon unemployed labour. But since with a high rate of investment equipment would certainly increase faster than the available labour supply (through an increase in population, immigration, etc.), sooner or later there would be more "machines" than "men"; and some of the machines would have to remain idle. Given the *character* of equipment, there must come a point beyond which the creation of further equipment can add nothing to output[1]; while equipment would begin to be under-employed even before this point is reached.[2]

If the forces of competition acted smoothly, the emergence of excess capacity in equipment would involve a rise in real wages (a fall in profits, per unit of output)[3] which in turn *would* lead to the introduction of more capital intensive equipment (or, rather, the replacement of existing equipment with more labour-saving equipment) provided the supply-price of capital fell in the same proportion as real profits. (The adoption of more roundabout processes, in turn, would to some extent reduce real wages and restore profits.[1]) There are several reasons, however, why in the real world this sequence of events cannot take place—at any rate not without a temporary interruption of investment activity. In the first place, on account of imperfect competition, the fall in the marginal rate of profit need not involve a similar fall in average profits. In the second place, the emergence of excess capacity will discourage investment not only on the methods actually adopted, but also on the more capitalistic methods; so that the adoption of these methods will now require a much *greater* reduction in the rate of interest than it would have required before.[2] In the third place, the rate of interest, for well-known reasons, cannot suddenly be reduced and would normally only fall gradually *after* investment activity and the level of money incomes have fallen. And lastly, the appearance of excess capacity must imply that some of the expected profits on investments undertaken in the recent past were not realised, which in turn is likely to shake the investors' confidence. This diminution of confidence may for a time more than counterbalance the effect of any practicable reduction in the rate of interest. For all these reasons, but particularly the second and the fourth, once the "malinvestments" which were undertaken are uncovered the temporary collapse of investment activity will be quite inevitable. If this is to be prevented, the misdirection of capital would have to be prevented; the rise in real wages and the fall in the rate of interest would have to occur at a much earlier stage.[1] [2]

---

[1] How soon this point is reached depends, of course, also on the extent to which equipment can be substituted for labour in production. Under conditions of modern technique, the variability of coefficients is highly limited if the *type* of equipment is given.

[2] This is not to suggest that scarcity of labour is the effective force which brings a boom-period normally to an end. But it is suggested that this would bring booms to an end, if they were not brought to an end already at an earlier stage, on account of the insufficiency of consumers' demand or a restriction of credit. (This question is further treated in another article by the present writer on "Stability and Full Employment," *Economic Journal*, December, 1938.)

[3] Under conditions of *perfect* competition and fixed technical co-efficients, real profits would fall to zero (wages would absorb the whole product) and would remain zero so long as the state of excess capacity prevailed. For this implies constant marginal costs, where the marginal product of labour is equal to its average product. But in so far as distribution is determined by the degree of monopoly, rather than marginal productivity, profits per unit of output need not necessarily fall. (See Kalecki, "The Determinants of Distribution of the National Income," *Econometrica*, April, 1938.)

---

[1] In fact, this is how Wicksell envisages, in the "Analysis of Åkermans' Problem," the adoption of more "roundabout" methods as a result of capital accumulation. Cf. *Lectures*, Vol. I, p. 288:—"When capital first increases and there is a consequent disturbance of equilibrium, *capital will also—or rather exclusively—grow in breadth*, since in the beginning the additional number of new capital-goods will be of the same type as those already in use. If, on the other hand, the amount of labour invested per moment of time is temporarily increased and the amount of free labour diminished there will be a rise in wages and a fall in the value of the use of capital [goods], more or less in this sequence. Further . . . . the new capital goods now produced will be manufactured to last longer, as this method of investment has become most profitable. But when equilibrium is reached once more the amount of free labour and of labour engaged in replacing capital resume their former proportions (*at the same time the labourers lose part of, but not all, their recent increase in wages and the capital goods regain part of, but not all, the value they have just lost*)." (Italics not in the original. Wicksell assumed here (i) a stationary equilibrium to start with; (ii) free transferability of labour between the consumption good and the investment good industries [i.e., between "free" and "invested" labour]; (iii) perfect competition, the absence of money except as a "numéraire," and—implicitly rather than explicitly—that the market-rate of interest is always immediately adjusted to any change in the level of profits. The last conclusion—that the distribution of labour between the two industries will actually regain its former proportion in the new stationary equilibrium—was due to the fact that Wicksell assumed that the increase in capital intensity takes exclusively the form of greater durability, and not of greater automatism, of equipment and that he took a particular function for the extension of durability.)

I have quoted this passage in full because I believe—though neither Wicksell nor his readers seem to have realised it—that it provides a basis for an *endogeneous* theory of the Trade Cycle. If it is true, what seems to follow from Wicksell's analysis here, that it is in the nature of the process of capital-accumulation itself, that as a consequence of a given amount of additional capital created, the immediate reduction of profits should be greater than their ultimate reduction (because in the beginning, capital intensity remains the same as before and will only be increased afterwards), the Trade Cycle itself appears as a direct consequence of capital accumulation. For it shows that "that cyclical change in the marginal efficiency of capital" which Mr. Keynes regards as the essence of the Trade Cycle (*General Theory*, p. 313) is inherent in the mechanism of accumulation itself. (As we shall see in §7 below, Wicksell's conclusions need to be modified in certain respects. But the fundamental idea that fluctuations in the level of profits result from capital accumulation remains unaffected.)

[2] Because, while the excess capacity lasts, the marginal efficiency of investment on the more capitalistic methods will be confined to the *additional* profits that can be earned—with the aid of these methods—per unit of output. This could, perhaps, be made clearer in the following way. Entrepreneurs in choosing between, say, two different types of equipment, one of which is superior, and hence more costly, than the other, will choose the superior equipment if the additional profits earned on it more than cover the interest charges on the *additional* cost of the superior equipment. When, however, equipment of the inferior type already exists in superabundance, the inducement necessary to install the superior equipment is that the additional profits earned on it should more than cover the interest charges on the *whole* cost of the superior equipment. (Hence the existence of a superfluous amount of capital goods of the less capital-intensive type by itself reduces the marginal productivity of capital ntensification.)

It appears therefore that in arguing that investments undertaken during a boom are doomed to failure because they involve the adoption of *excessively* roundabout methods, the Austrian theorists got hold of exactly the wrong end of the stick. (But they *did* get hold of a stick—which is not always realised.) It would certainly be more correct to say that investments during the boom are doomed to failure, or that the boom is doomed to a failure, because the investments undertaken in a period of monetary expansion are *insufficiently* roundabout. For the elimination of cyclical variations, i.e. a steady and even rate of capital accumulation, certainly cannot be realised unless the degree of capital intensity of production is also increased steadily and continuously. Moreover, an excessive rate of increase in capital intensity, even were it to occur, need have no such disastrous effects as follow from its insufficient increase. For all that an excessive increase need imply is the emergence of temporary technological unemployment in the consumption goods industries; and provided this is not allowed to have unfavourable repercussions on the general demand for consumption goods, it will not block the way to the continuance of investment activity and thus to the gradual disappearance of this unemployment.[1]

---

[1] I said "the rise in real wages *and* the fall in the rate of interest" because the occurrence of either might be unavailing in the absence of the other. A rise in real wages, without a reduction in interest, will reduce the scale of investment; while a reduction in interest without a rise in real wages (at the stage at which it would be necessary) might lead to hyper-inflation.

[2] Technical inventions (both capital-saving or labour-saving) reduce the amount of labour required per unit of output and therefore alleviate the tendency to excess capacity on account of the second cause. But they enlarge the productive capacity created by a given investment (of a given capital intensity) and hence tend to aggravate it on account of the first cause.

In a recent book[2] Mr. Hawtrey has shown himself aware of the fact that investment during the boom need not involve the adoption of more capitalistic processes. He calls such investment the " widening process ", as contrasted with investment which increases capital intensity, which he calls the " deepening process ".[3] But he does not attribute much importance to the misdirection of capital in the widening process. He appears to think that the necessary switch-over from the widening to the deepening process can proceed without difficulty (except, perhaps, at times when there is already a large contraction of incomes due to some other cause) in a community where there are still unexploited technical opportunities left for " deepening ".[4] He seems to ignore the fact that (*i*) the deepening process requires a change in price-relations which the mechanism of the boom does not provide ; (*ii*) the adjustment from the widening to the deepening process is many times more difficult once the widening process has overreached itself, as it is likely to do from either of the two above-mentioned causes. For once excess capacity in equipment appears, the incentive to undertake further investment might be entirely lacking, apart from any difficulties of getting the rate of interest reduced.

7. Finally, we may examine the so-called " doctrine of

---

[1] If the malinvestment really took the form of an excessive increase in roundaboutness, one would expect this to manifest itself by growing unemployment in the later stages of production (in the consumption good industries) which is certainly not a usual phenomenon.

[2] *Capital and Employment*, esp. Chs. III and IV.

[3] Pp. 36, 184, 185. Mr. Hawtrey appears to think, however, that the widening and deepening processes always go on at the same time ; he does not deal with the possibility that the widening process can be associated with " shallowing ", rather than " deepening." Also, he seems to think that technical inventions necessarily promote deepening, which, as we have seen, is not the case.

[4] *Ibid.*, pp. 70, 78–80, 102–104, 126. Cf., e.g., p. 107 : " If consumption demand as a whole does not grow fast enough to absorb the additional output that means that the capital outlay has been directed too much to widening and not enough to deepening. What is missing from consumption demand is seeking investment and only requires an intensification of deepening to satisfy it. The deepening process may reach its limit but that can only be when there is a glut of capital. Even when the cheapening of products fails to elicit additional demand, when, in other words, there is a general glut of consumable goods, that does not necessarily mean a glut of capital. The deepening process will go on as long as the substitution of instruments for labour can realize a saving in cost." Yet on p. 42 he admits that " in practice . . . even a big drop in the rate of interest may take a long time to induce manufacturers to adopt a piece of plant . . . which they have previously neglected on the ground that it would not pay " and on p. 183 that the " interruption of the widening process . . . [reacts] . . . unfavourably on the deepening process." Cf. also my paper, " Mr. Hawtrey on Short and Long Term Investment," ECONOMICA, November, 1938.

forced saving " : that investment created by credit-expansion will differ in its effects from investment created by " voluntary savings ". It is this doctrine, more than any other, which is the distinguishing characteristic of the Austrian School ; and which is responsible for their fundamental thesis that the creation of capital by expansion of credit is the ultimate cause of cyclical fluctuations.

In the first place, however, the terms " voluntary " and " forced " saving require to be defined, or rather re-defined. In a strict sense, there is no such thing as " forced saving ", as Mr. Keynes and Mr. Hawtrey have shown.[1] Since the level of income is determined at the point where the volume of savings forthcoming is equal to whatever is the current rate of investment, all savings must be voluntary : for if the community desired to save either more or less than it did save, total income would be either lower or higher than it is. The mere fact that income is what it is is proof that people save no more than they are willing to save.[2]

We might, however, distinguish between an increase in savings due to an increase in income and increase in savings due to an increased propensity to save out of a given income. Since the first involves " monetary expansion ", and the second does not, this distinction corresponds most closely to the Austrian meaning of the terms " forced savings " and " voluntary savings " respectively. For under the term " forced savings " the Austrians meant the creation of new capital which was brought about, or at any rate occurred *pari passu* with, an expansion of the monetary circulation (i.e. an increase in money-incomes) ; while under the term " voluntary savings " such creation of new capital which occurred *pari passu* with an equivalent reduction in the money demand for consumption goods (leaving total money incomes constant).

On the basis of Mr. Keynes' *General Theory* " voluntary savings ", in this narrower sense, could not materialise at all. For a fall in the demand for consumption goods implies a *reduction* in the marginal efficiency of capital (it implies higher real wages): and unless the rate of interest fell the level of investment would diminish in consequence of an increased propensity to save, rather than increase. The rate of interest, on the other hand, is governed by liquidity preference and the quantity of money and not by the propensity to save.

---

[1] Cf. Keynes, *General Theory*, pp. 79–80 ; Hawtrey, *Capital and Employment*, pp. 251–263.

[2] In any one period. But given the rate of investment, income in a succeeding period can be higher than income in the first period, i.e., people may require the inducement of a higher income to continue to provide the same amount of savings. Hence one can argue that though all savings are " voluntary ", not all savings are necessarily " intentional " : i.e., that people would have saved less (or more) than they did save—say in a given week—had they foreseen accurately their income for that week. But unless the process of income expansion (or contraction) went on indefinitely, all savings would sooner or later become " intentional " as well.

We might assume, however, a monetary policy under which the rates of interest are so governed as to keep aggregate money incomes constant. (For the purposes of this argument, we can ignore the question of whether such a policy could, in fact, be carried out.) Under this policy, an increased desire to save cannot prove abortive: since by assumption the monetary authority will reduce the rate of interest precisely to the extent necessary to augment the demand for investment goods by the amount by which the demand for consumption goods has fallen off. (In a sense, this requires a *double* reduction in interest; partly to offset the effect of the *fall* in the schedule of the marginal efficiency of capital, partly to secure the required movement *along* the marginal efficiency curves.) On the other hand, an increase in profit expectations, with given consumption demand (i.e. a rise in the marginal efficiency schedule), cannot lead to an increase in investment: since, on the assumption that money incomes are held constant, the monetary authority will raise the rate of interest precisely to that extent as would be necessary to keep the level of investment constant. Hence under this policy " forced savings " cannot occur.

It should be obvious from this without further argument that " forced saving " and " voluntary saving ", as above defined, do not create capital goods of the same kind. Because " forced saving ", in our sense, must be due to a rise in profit-expectations which is not offset, or not sufficiently offset, by a rise in the rate of interest; while " voluntary saving " must imply a fall in profit expectations which is *more than offset* by a reduction in the rate of interest. In the one case the increase in investment is associated with a higher level of consumption and a fall in real wages; in the other with a lower level of consumption and a rise in real wages. In the one case the increase in the rate of investment is consistent with an unchanged, or even a higher, rate of interest; in the other case, it *must* involve a reduction in the rate of interest. *Hence a given increment* *in the rate of investment associated with "voluntary saving" must imply investment of a higher degree of capital intensity than the same increment in the rate of investment associated with "forced saving".*[1] The former, as distinct from the latter, should always involve the adoption of more capital-intensive methods of production.

There is a sense therefore in which "forced saving" (i.e. credit expansion) involves the misdirection of capital, in a way in which "voluntary saving" does not; but it does so for a reason that is *precisely opposite* to that assumed by Professor Hayek. It is because forced saving *does not* involve an increase in roundaboutness (and probably involves its decrease) that investment in connection with "forced saving" leads to a situation that "cannot be maintained".[2]

This does not mean that a policy of keeping aggregate money incomes constant (even if it were possible to carry it into effect, which is doubtful) would in itself ensure that the capital intensity of new investment increased in the required degree and would thereby automatically create the conditions under which an even rate of capital accumulation is possible. For it still remains true that as new capacity is installed profits per unit of equipment must fall; and unless this is sufficiently anticipated the degree of capital intensity adopted will be less, and the fall in profits greater, than would have been the case with optimal adjustment.[3] Thus in the absence of perfect foresight there is no mechanism to ensure that the character of newly produced instruments, at a given rate of aggregate investment, should be so adapted as to prevent the emergence of surplus capacity as a result of the investment; and this will be all the more likely to occur the higher the rate of total investment. But if our propositions regarding "voluntary" and "forced" saving are correct, such malinvestment is likely to be less considerable when increments in the rate of investment are offset by decrements in consumption, than under a policy which allows rapid increases in the total level of activity to take place. Hence under a system of elastic credit

---

[1] This proposition remains valid, even if the rise in investment activity in the case of "forced saving" is due to an increase in confidence, or to an "inflationary" reduction in the interest rate. For even in this case the effective marginal cost of borrowing, at a given rate of investment, will be higher in the absence of a reduction in the demand for consumers' goods, than with such a reduction.

[2] It "cannot be maintained" because it will lead to a (more rapid) exhaustion of investment opportunities, and *not*—as the Austrian School suggests—because it causes excessive consumption, i.e., a shortage of "savings".

[3] Cf. the quotation from Wicksell in footnote 1, p. 59 above.

(i.e. fluctuating money incomes) the cyclical fluctuations in capital intensity and the fluctuations in the rate of profits are likely to be much more severe than under a system of constant incomes, even if the amount of real investment over the period is assumed to be the same in the two cases.[1] It thus appears that certain conclusions of the Austrian School, even though not the economic analysis on which they were based, contained an important core of truth.

III.—Summary and Conclusions

(1) It is suggested that (*i*) recent emphasis on fluctuations in total income and employment and (*ii*) the attacks on the Austrian theory of capital have led to an undue neglect of the rôle in trade-cycle theory of changes in technical methods of production.

(2) The unsatisfactory concept of the investment period used in the Austrian theory to describe productive methods may be replaced by the more exact concept of capital intensity defined as the ratio between initial and annual cost of producing a given output.

(3) The degree of capital intensity actually adopted is shown to depend predominantly either on the level of real wages or on the rate of interest, according to whether inelasticity of the supply of capital or imperfection of the market for the commodity produced plays a greater part in limiting investment.

(4) Since real wages tend to fall and interest rates to rise during the upward phase of the business cycle, the probability is that investments undertaken during this period will be of *less capital intensity* than those undertaken during the depression. Increased confidence during the boom is likely to modify but not countervail this conclusion. Technical progress may affect the secular trend of capital intensity, but not its cyclical variations.

(5) But the high level of investment of the boom must

---

[1] It may be noted that this conclusion regarding the unstable nature of investments financed by credit-expansion goes somewhat further than the similar conclusions based upon other theories of the trade cycle. Over-investment theorists were concerned with the danger of savings failing to catch up with the growth of investment; while under-consumption theorists with the danger of investment lagging behind the increase in savings. Both of these troubles could theoretically be mitigated by appropriate action either to stimulate savings or consumption. But in the case of an insufficient capital intensity of investment, such as our analysis has shown to follow from rapid credit-expansion, no such remedial action is possible: once the wrong kinds of capital goods have been produced, there is no possibility of avoiding the fall in profits and the discouragement to further investment from occurring.

come to an end unless capital intensity continually *increases*, for two reasons : (1) As real income increases more is saved, leading to a deficiency of demand for available output, unless the latter is itself reduced by increases in capital intensity. (2) Unless additional machines are increasingly labour-saving there will sooner or later be a deficiency of labour to work with them and their product (and value) will fall, involving unanticipated losses. Real wages will tend to rise, which will ultimately correct the disequilibrium, but once redundant capacity has arisen a temporary breakdown of the investment process is inevitable.

(6) Hence *failure* of capital intensity to increase, not its *excessive* increase (as supposed by the Austrian theory) explains the breakdown of the boom.

(7) An increase in the scale of investment which is associated with an increase in consumption (" forced saving ") will tend to reduce capital intensity, while an increase in the scale of investment which is associated with a reduction in consumption will tend to increase it. Hence the former is more likely to lead to a breakdown than the latter.

The Equation of Exchange: A Suggestion

By L. M. Fraser

The purpose of this paper is to propose a revised form of the " equation of exchange "—a form which (it is claimed) combines the advantages of both the Fisher equation and the type adopted by the Cambridge school. The main difference between these is, of course, that the former deals with transactions over a period of time, the latter with resources at a moment of time. Fisher's equation is more immediately intelligible but is unable to allow adequately for the fact that the quantities it relates may change within the period under consideration. The Cambridge equations escape this difficulty and are more readily translatable into demand and supply terms ; but they are to that extent unrealistic and are not readily susceptible of numerical expression.

§ 1. Two preliminary difficulties must be noticed.

First, there is a troublesome ambiguity as to the " time dimension " of V, the velocity of circulation of money, in Fisher's equation ($MV=PT$).[1] In his numerical illustrations and also in the Appendix devoted to its elucidation he is careful to exhibit it as a " *rate* of turnover " (my italics) ; i.e., it has a time dimension of -1—as any velocity concept should.[2] On the other hand in deriving the equation from its " matrix " V is given a time dimension of 0. The " matrix " is that in any period of time—say a year—the value of the goods exchanged against money is equal to the value of the money exchanged against goods. The " money " side is then split up into the quantity of money, M, and its " velocity of circulation," V—the latter being *in this context* described as " simply the quotient obtained by dividing the total money payments for goods in the course of a year by the average amount of money in circulation."[1] If so it is a number, and not a " rate " : the whole equation relates the goods exchanged *in* a given period of time (not *per* period of time) to the money paid for them.

---

[1] For the time being M is to be understood as including all circulating media of exchange, whether of the form of coins and notes or of " credit " (bank deposits).

[2] *Purchasing Power of Money*, 1925 ed., pp. 18–20, 352–4.

It is not necessary for the present purpose—nor for Fisher's—to decide which of these interpretations is correct. But we must have separate symbols for the two concepts. Let us denote " number of times in a period " by V_1, and " number of times per period " by V_2, the relation between them being that V_1 equals V_2 multiplied by the period of time chosen.[2]

A similar ambiguity is of course present in T, the volume of goods sold against money either *in* a given period of time (T_1) or *per* period of time (T_2). And the whole equation may be written either $M V_1 = P T_1$ or $M V_2 = P T_2$ according as we do not or do wish to insert the phrase " per unit of time " on both sides.[3] The point is purely formal so long as we are not concerned with changes in the velocity of circulation of money and the turnover of goods within the period under consideration. It becomes fundamental as soon as we take the possibility of such changes into account —as we must when relating an equation of the Fisher type to a statement as to the forces determining the value of money at a particular moment of time.

The second preliminary point relates to the Cambridge equations. They take two main forms, according as they relate the value of money to incomes or to non-monetary resources in general. In this paper I am concerned with the latter type of equation only. I take it as the first duty of monetary theory to explain the value of money, relating this to the demand for it and the supply of it. And the first and fundamental " equation of exchange " must be that which exhibits and classifies the forces determining the purchasing power of money over (not consumption goods but) wealth in general. In such a connection there is no difference in status between the world of business and industry and that of income and consumption ; the demand for money is just as important, the reasons for that demand are just as convincing, and its influence on the value of money is just as potent, when those who demand it are entrepreneurs, employers, or speculators as when they are income receivers and consumers. I therefore ignore the distinction—vital as it of course is for the application of monetary theory to the analysis of the trade cycle—between the income circulation and the industrial and financial circulations of money. In what follows the "value of money" relates to its exchange relationships with other commodities and services *of all kinds.*

---

[1] *Purchasing Power of Money*, 1925 ed., p. 17.

[2] Thus, if V_2 is 20 times per year (time dimension -1), and the period chosen is one year, then V_1 is 20 (time dimension 0).

[3] In fact Fisher never (so far as I have noticed) inserts " per unit of time " on the goods sides of the equation, which wears the appearance of a pure quantity of money value.

For the present purpose I confine myself to two versions of the Cambridge type of equation—that of Keynes in the *Tract* and that of Pigou.[1]

§ 2. The equation I propose may be written

$$M\,v\,t = P\,R\,u\,t \quad\ldots\ldots\ldots\ldots\ldots(1)$$

where M is the quantity of money units of all kinds in existence, v is its velocity of circulation, understood as the rate at which it changes hands against non-monetary resources per indefinitely small unit of time, P is the general price level, R is the community's total non-monetary resources, u is the rate at which these change hands per indefinitely small unit of time, and t is the number of such small units of time comprised in a finite period, say a year. For the time being I assume that neither M, P, nor R change during the period; each can therefore be understood as relating either to a moment of time or to the whole year.

If we adopt the former standpoint—as in the Cambridge type of equation—t must be cancelled out on both sides, and it is proper to bring u and v together on the right hand side of the equation—which thus becomes

$$M = P\,R\frac{u}{v}\quad\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

What it now tells us is that the value of money at any moment (as represented by its reciprocal, the price level) is determined by

(*a*) the quantity of money in existence at that moment;
(*b*) the quantity of non-monetary resources in existence at that moment; and

---

[1] Keynes, *Tract on Monetary Reform*, p. 77; Pigou, *Essays in Applied Economics*, pp. 174ff.—cf. *Quarterly Journal of Economics* for November, 1917. On the distinction between the "income" and the "transaction" approach to monetary problems see Robertson, *Money*, 1928 ed., chap. ii, §§ 5–8 and appendix.

(*c*) the ratio between the velocity of circulation of money and the velocity of circulation of non-monetary resources.

Now $\frac{u}{v}$ in addition to expressing this last ratio, also represents what we may call the "relative demand for purchasing power in monetary form." It stands for the ratio between the total purchasing power of the community's monetary resources, and the total value of the community's non-monetary resources. This follows from the fact that all goods are assumed to be exchanged against money: if, then, the average velocity of circulation of money is (say) ten times that of non-monetary resources, then the total value of the money so circulating must be one tenth of the total value of these resources. An increase in $\frac{u}{v}$ must mean that the community has raised the proportion of its total resources which it holds in monetary form: the relative demand for liquid purchasing power has risen—and if both the quantity of money and the quantity of non-monetary resources remain constant, the price level must fall; i.e. a rise in the demand for money has brought about a rise in its value.

It follows that $\frac{u}{v}$ is effectively the same as k in the equation of exchange proposed by Pigou.[1] We must, however, premise here that the position considered is one of equilibrium. If it is not, then $\frac{u}{v}$ will not represent the relative demand for liquid purchasing power, being larger or smaller than that demand according as people are anxious to reduce, or to expand, their monetary holdings.[2]

When we multiply $\frac{u}{v}$ by R we get what we may call the "absolute demand for purchasing power in monetary form"—the total purchasing power of the community's stock of money units. It is thus the same as k in Keynes's equation, $n = pk$;[1] and so interpreted our equation tells us, as does Keynes's, that (in equilibrium) the quantity of money units is equal to the demand for purchasing power in the form of money divided by the unit value of money.

---

[1] See note 2 on following page.

[2] Cf. *Economic Thought and Language*, Supplementary Note 9 (p. 382). Since Fisher's equation does not specifically deal in the "demand for money" it does not of itself raise the question whether the position is one of equilibrium during the period of time under consideration.

Finally when we multiply $R\frac{u}{v}$ by P we have the " demand for money units " : given the (absolute) demand for liquid purchasing power, the number of units of money required to satisfy that demand depends upon, and varies inversely with, the value of each such unit—in other words it varies directly with the price level. If, then, we fix our attention on the product $PR\frac{u}{v}$ we find our equation coming to rest on the safe ground of asserting that in equilibrium the supply of money units equals the demand for them.

There remains the problem of interpreting R. It is in principle the same as R in Pigou's equation.[2] As such it is not a purely volume concept. We have to imagine a unit or standard of value other than the monetary standard in terms of which to relate and compare the value of non-monetary resources with the value of money. It may be based either (with Pigou) upon a particular commodity like wheat—in which case R is the " wheat value " of the community's non-monetary resources—or upon money itself *at a period other than the one under consideration*,[3] or, finally, in terms of a purely imaginary scale of value units.[4] This

---

[1] *Monetary Reform*, p. 77. Keynes defines n as the number of " currency notes or other forms of cash in circulation with the public " (including the business world); i.e. it is for the present purpose identical with M.

[2] Pigou, op. cit. Pigou writes

$$p = \frac{kR}{M},$$

where M is the quantity of money in circulation, p is its unit value in terms of some commodity such as wheat, and R is the total value of the community's resources in terms of the same commodity. Pigou defines k as " the proportion of (the community's) resources that it chooses to keep in the form of exchange media of all sorts ".

One minor difference between the two versions should be observed. R in Pigou's version stands for total resources, monetary and non-monetary alike, whereas my R excludes monetary resources. Correspondingly his k is the proportion of monetary to total resources, whereas $\frac{u}{v}$ in my formula is the proportion of monetary to non-monetary resources, and is thus equal not to k but to $\frac{k}{1-k}$. Pigou's $R \times k$ is of course numerically the same as my $R \times \frac{u}{v}$.

I can see no adequate ground for supposing—what has sometimes been suggested—that Pigou's equation refers simply to income and the income circulation.

[3] This is in fact Fisher's method: see his *Purchasing Power of Money*, p. 196, etc.

[4] Cf. on the last possibility *Economic Thought and Language*, pp. 152–4.

" standard of value " is of course a mere piece of scaffolding : it eliminates itself as soon as *either* we take the left hand side of the formula as a whole (since P, the expression for the value of money, must be calculated with reference to the same standard as R) *or* we compare the formula at two different periods of time and concern ourselves with the proportionate intervening change in either R or P.

This complication is, of course, present in Fisher's and Keynes's equations as well as in Pigou's and the one here proposed. Fisher's T and Keynes's k both of them require, if they are to be interpreted independently of the other members of their formulæ, the assumption of a standard of value other than money itself—a standard which reappears " negatively " in the figure for the price level, and so disappears when the right hand side of the equation is taken as a whole. It is an advantage of Pigou's formulation that it does not attempt to conceal the need for such a standard.[1] On the other hand if we are concerned mainly or exclusively with comparing different moments (or periods) of time it is more natural and intelligible to express the value of money indirectly by its reciprocal, the price level. The standard of value scaffolding is then simply the base and the system of weights in terms of which we compute our index numbers.

§ 3. Let us now turn to the relation between the equation here proposed and that of Fisher. We now consider a finite period of time t—say a year. And let us suppose to start with that the velocities of circulation v and u do not change during the year. Then,

(*a*) for $v\ t$ we can write V_1 as defined above (p. 68); correspondingly, for $u\ t$ we can write U_1, the number of times a representative unit of non-monetary resources changes hands during the year. Our equation then becomes

$$M\ V_1 = P\ R\ U_1 \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

(*b*) V_2 is simply v related to a finite instead of to an indefinitely small period of time ; similarly to u there corresponds U_2, the rate of turnover of non-monetary resources *per year* (or other reasonably long period of time). We then have, by substituting in formula (2),

---

[1] I do not myself feel, therefore, that Pigou's use of wheat as a standard of value deserves the strictures passed upon it by Keynes (*Treatise*, Vol. I, pp. 232 (foot)–233 (top)). We can of course if we prefer use some other commodity—e.g. labour or a composite " unit of productive resources " (cf. Marschak, " Vom Grössensystem der Geldwirtschaft," in *Archiv für Sozialwissenschaft und Sozialpolitik* for July, 1933).

$$M\ V_2 = P\ R\ U_2 \ldots\ldots\ldots\ldots\ldots\ldots(4)$$

In these ways we arrive at equations which are identical with the two possible interpretations of the Fisher equation, except for the analysis of his T into the components R and U. We need not discuss in detail the validity of U; it depends on envisaging R as a fund of wealth which survives through time and undergoes all those changes which we call production and consumption without losing its continuous identity.[1] Clearly, however, it has some relevance for the problem of integration and disintegration. An increase in the number of stages involved directly or indirectly in a particular productive process will be a force tending to raise U (unless the time taken by the process is correspondingly lengthened), a decrease will tend to lower U (unless the time taken is correspondingly shortened). It is an advantage of the formula here proposed over Fisher's that it distinguishes such changes from changes in the volume of resources (R) due to saving and dissaving, population trends, etc. This is not of course to deny that the two types of movement may be closely connected. But for analytical purposes it is of manifest importance that we should draw a clear line between those alterations in Fisher's T which are due to changes in the *amount* and those which are due to changes in the *rate of turnover* of the community's resources. The latter are as such merely organisational in character, whereas the former represent the chief measure of economic progress and decline. Moreover (what is of more immediate importance) changes in R are not on the face of it particularly likely to give rise to changes in V (transitional disturbances apart), at any rate unless they are violent or sudden; whereas changes in U may be expected in the ordinary course to be at least to some extent accompanied by offsetting changes in V.[2] To the extent that this happens we may say that the velocity of circulation of money and the velocity of circulation of non-monetary resources are moving in sympathy; and when they do this the demand for money remains unaffected. From which it follows that however difficult it may be to offer a precise interpretation of the concept of velocity of circulation as applied to non-monetary resources such a concept is essential if we are to bridge the gap between equations of exchange of the Fisher type and an adequate analysis of the value of money in supply and demand terms.

---

[1] See note at the end of this paper.

[2] Thus if a process of organisational disintegration is accompanied by a proportionate decline in the average cash balances of the (more numerous) firms concerned, or a process of integration by a proportionate rise in average cash balances, then the increase (decrease) in U would be exactly cancelled out by an increase (decrease) in V, so that the relative demand for liquid purchasing power—U/V—would remain unaffected. In practice it is presumably unlikely that average cash balances will change to the full extent that this would require, but far from unlikely that they will experience *some* change in the appropriate sense; if they do, then a change in U will be accompanied by a *less than proportionate* change in U/V. It may be added

It remains to discuss the problem of allowing for changes in velocities within the period envisaged by the Fisher equation. Suppose that during the year the rates of turnover of resources, both monetary and non-monetary, are undergoing more or less continuous modification. Then we can no longer treat V_1 and U_1 as the products $v\ t$ and $u\ t$ respectively, unless we are prepared to define v and u so as to make them mere averages of averages—the *average* rates of turnover during the year of *representative* units of money and non-monetary resources. If we are to continue interpreting these symbols as standing for velocities of circulation at a given moment—and we must so treat them if the quotient of the first into the second (u/v) is to stand for the " relative demand for purchasing power in monetary form "—then U_1 and V_1 are not products but integrals —viz. $\int_0^t u\,dt$ and $\int_0^t v\,dt$ (where 0 and t are the first and last moments of time in the period under consideration). Correspondingly U_2 and V_2 are these integrals divided by t.[1] What this unhelpful conclusion means is that in a changing world figures for velocities of circulation during a period of finite length are in fact largely arbitrary; V is

---

that in the financial world, where non-monetary resources take the form not of goods and services but of claims, increases or decreases in U and V frequently go hand in hand and so cancel each other out as forces influencing the value of money.

For the conclusion that changes in the velocity of circulation of money may, but need not, be offset by corresponding changes in the velocity of circulation of goods, cf. Marget's articles on this matter in the *Journal of Political Economy*, Vol. XL (1932), pp. 290–313, 477–512.

[1] We can allow for changes in M, P and R in the same way; and the Fisher type of equation then assumes the generalised forms:

$$\int_0^t (M\ v)\,dt = \int_0^t (P\ R\ u)\,dt \qquad \ldots\ldots\ldots\ldots\ldots(5)$$

$$\text{and}\quad \frac{1}{t}\int_0^t (M\ v)\,dt = \frac{1}{t}\int_0^t (P\ R\ u)\,dt$$

These reduce to formulas (1) and (2) only when M, v, P, R and u can be taken as constant for the period 0 to t.

merely the quotient of M into MV and U the quotient of PR into PRU, and the Fisher type of equation drifts back into a bare assertion of the tautology that the value of the goods bought with money during any period is equal to the value of the money paid for them. From which it appears that if the primary function of the equation of exchange is to display and classify the forces determining the value of money the better type of equation is that which concerns itself with the position at a given moment, rather than with totals or averages over a year.

§ 4. I have so far said nothing about the problem of distinguishing between ordinary (standard or token) money and bank deposits or credit money: M has been assumed to stand for the total media of exchange of whatever kind in circulation. Now the main point of making such a distinction (I take it) is to relate the supply of credit money to the volume of cash reserves in the banking system—i.e. to exhibit the growth of bank money as a way of economising the use of cash, and the quantity of deposits as bearing a definite relationship to—e.g. being a particular multiple of—their cash backing. If so, then I suggest that it is not sufficient to write, with Fisher, M' as the volume of bank deposits, with V' (or alternatively v') as their velocity of circulation. For M' is itself a product—viz. of the quantity of cash reserves in the banking system and that system's "coefficient of expansion"; in other words it is the cash reserves divided by the cash ratio. Writing, then, e for the coefficient of expansion and M' for the quantity of cash in the banking system we have

$$\begin{aligned} & M\ V + M' e\ V' = P\ R\ U \\ \text{or}\ & M\ v + M' e\ V' = P\ R\ u \end{aligned} \qquad \ldots\ldots\ldots\ldots(6)$$

Notice that $M + M'$ now represents the total cash in existence, while $M + M' e$ represents the total exchange media in circulation. It is not difficult to derive from this formula the corresponding versions of the Cambridge equations, since e is the reciprocal of the symbols employed by Pigou and Keynes (h and r respectively) for the banks' cash reserve ratios. But I forbear to pursue this matter, partly because doing so would shed no particular light on the forces determining the value of money, partly also because I cannot help feeling that the extended versions of Keynes's and Pigou's equations, by laying stress on the total quantity of cash in existence rather than on the total quantity of exchange media in circulation, tend to give the impression that reserves in the form of "cash" (i.e. coins and notes) are what matter in a sound commercial banking structure and so encourage the idea that banking deposits are somehow an inferior and "substitute" kind of exchange medium. This topic, however, lies outside the limits of the present paper.

NOTE. The concept of the "velocity of circulation of goods" has been exhaustively analysed by Professor A. W. Marget in two articles in ECONOMICA.[1] The author understands "velocity" in the Fisher sense; it is in some sense the average number of times goods change hands during a reasonably long period of time (or per reasonably long period of time), and can thus be described, in the notation of this paper, as the quotient of R into $R\,U$ or T. Since he is not concerned with the difficulties of interpreting T—which he defines as the "physical volume of sales" during the period—the question resolves itself into deciding as between rival interpretations of R. In the end he concludes in favour of defining R as the "physical volume of goods intended for sale." This view is very different from that suggested in the present paper; perhaps I may explain briefly why I find Marget's interpretation unsatisfactory for equational purposes.

(1) Marget's definition is designed to draw a sharp contrast between the activities of "middlemen" and those of entrepreneurs. The former resell what they have bought, whereas the latter use up what they have bought and sell something different—viz. a product.[2] Marget objects to the type of analysis offered in §3 of this paper on two main grounds: (*a*) that it overlooks the fact that in converting factors of production into finished products entrepreneurs are in general adding to total utility and creating new goods; and (*b*) that it precludes the equation of exchange from distinguishing between technological changes and changes in marketing practice.[3] But: (*a*) middlemen add to the utility of the goods they handle no less than do entrepreneurs—unless we revert to the view that merchants, etc., are "unproductive" labourers. If therefore the fact of increased total utility is fatal to treating non-monetary resources in the way here proposed it is also fatal to treating goods passing through middlemen's hands in the way proposed by Marget except to the extent that the middlemen's intervention in the economic system is purely wasteful. (*b*) The distinction between technological changes and changes in marketing practice is no doubt of importance in its own right, but I cannot see that it is of immediate relevance for an understanding of the demand for and value of money.

(2) Marget holds that the velocity of circulation of goods must be so defined as to include two different and (by implication) independent factors: the "number of middlemen's sales" and the "rate of sale."[4] If, however, by the former is meant the number of sales *within a specified period of time* it is not independent of the rate of sale, being in fact the latter multiplied by the period of time in question.[5] If, on the other hand, the former factor means the number of sales *until the good finally passes from the market* it has no necessary connection with velocity of circulation at all, since a change in it may be cancelled by a corresponding change in the length of time during which the good remains on the market. In either case its claim to be an independent constituent of velocity of circulation seems to vanish.

(3) Marget confines his attention to material goods; capital claims are left out of account altogether, while services (e.g. labour) are held not to have a velocity of circulation, and it is suggested (first article, p. 449) that they should form a second item alongside of that dealing with material goods on the right hand side of the equation. One reason for this view is the conviction that (e.g.) the product of labour must be counted as a different item of non-monetary resources from the labour itself. Another, perhaps, is the feeling that the "value of money" must be first and foremost its purchasing power over consumption goods rather than over resources in general. Neither of these points convinces me. I have already said something about the second above (p. 68f.). As regards the first, I must content myself with saying that

---

[1] Vols. XII (1932), pp. 431–456; XIII (1933), pp. 275–300.

[2] The definition provides, however, for entrepreneurs to be included with middlemen once their products are ready, and are lying in their factories or warehouses awaiting sale.

[3] ECONOMICA, Vol. XIII, pp. 282, 284.

[4] *Ibid.*, Vol. XII, p. 448; Vol. XIII, pp. 287ff.

[5] In the notation of this paper, "rate of sale" is represented by u, period of time by t, and "number of sales" by ut or U_1. (Cf. on this point Marget's own criticism of Bresciani-Turoni's equation in the *Journal of Political Economy*, Vol. XL, p. 311.)

while I am fully alive to the difficulties in my interpretation of R they do not seem to me to be in principle greater as applied to the relation between labour and its products than as applied to (e.g.) the relation between long-lived material goods and the services which these yield and which are exchanged against money when the goods are hired out or leased. R must include all the non-monetary resources of the community in so far as they either (*a*) are themselves (or can be) objects of expenditure for those holding money balances, or (*b*) are capable of yielding such objects in the form of products or services. The community's labour power represents one form of its total resources so understood.

I adhere to the view, then, that *if our primary interest is in the value of money and the equation of exchange* U_1 must stand for the average number of times the community's *total* non-monetary resources change hands during the period under consideration, whether these resources change their physical form or not. Any departure from this position would mean that U_1/V_1 $(=u/v)$ no longer represented the "relative demand for purchasing power in the form of money" in any natural sense of that phrase, and the transition from the Fisher to the Cambridge type of equation would be difficult if not impossible.

A Survey of Milk Distribution

By H. S. Booker

This survey of milk distribution was undertaken in part of Battersea which appeared typical of many urban areas over the country. It is a working class area, and does not contain representatives of those professional, higher executive and higher administrative positions so characteristic of London.

The whole area divides fairly naturally, but not quite abruptly into two sections. One, called the Western Section, is classified by the New Survey of London as containing skilled workers. The other, the Eastern Section, contains unskilled labourers, mostly above the poverty line, though sections of some of the streets have a substantial number living below Charles Booth's poverty line.

The method of procedure was to obtain the milk consumption for each family in the area instead of the more usual method of sampling. The method used here gives more information about the problems of milk distribution.

The area chosen contained nearly 2,000 houses and considerably more families in eighteen roads with a total length of about four-and-a-quarter miles. Information of milk consumption was given by eleven and refused by one of the chief distributors. Only two of the dairies knew the names of their customers, and the supplier had to be checked in those houses which contained two or more families. After consideration it was decided to take the milk distributed in the week ending 21st November, 1936, as being a normal week, undisturbed by holidays or festivities, or by the influenza epidemic of the following spring. Ninety-four per cent. of the milk recorded in the area was distributed by the eleven retailers who gave information. The remainder had to be obtained by personal enquiry, most of the visits for which were made in April and May of 1937, and the time gap will introduce minor inaccuracies. In addition it is less accurate to ask members of families for their milk consumptions than to extract the figures from the round books of dairymen; most families tend to exaggerate their consumption.

MILK DISTRIBUTION IN PART OF BATTERSEA.

	Section		Whole Area
	Western	Eastern	
Number of Houses	1,393	559	1,952
Number of Families	1,656	886	2,542
Families per House	1·19	1·59	1·30
Number of Persons	5,714	3,185	8,899
Persons per Family	3·45	3·59	3·50
Milk Distributed, pints per week:			
Total	16,359½	5,736	22,095½
Per Family	9·88	6·47	8·69
Per Person	2·86	1·80	2·48
Number of Dairymen's Customers	1,834	865	2,699
Pints per Customer	8·92	6·63	8·19
Families not buying Milk	48	102	150
Proportion not buying Milk	2·9%	11·5%	5·9%

The number of dairymen's customers exceeds the number of families because some 11% of the families buy from more than one roundsman, which is greater than the proportion which buys no fresh milk at all.

PURCHASES OF MILK BY FAMILIES

Milk Purchased. Pints per Week	Number of Families		
	Western Section	Eastern Section	Whole Area
0 – 1½	59	117	176
2 – 5	335	297	632
5½– 8½	394	251	645
9–12	386	126	512
12½–15½	261	59	320
16 –19	124	19	143
19½–22½	56	14	70
23 –26	20	2	22
26½–29½	13	0	13
30 –33	3	1	4
33½–36½	1	0	1
37 –40	0	0	0
40½–43½	3	0	3
44 –47	0	0	0
47½–50½	1	0	1
	1,656	886	2,542

The most common consumption is one pint per day in the Western Section and half-a-pint per day in the poorer

Eastern Section, a factor of great importance when the costs of milk distribution are considered, for one expects those costs to depend as much on the number of customers as upon the quantity of milk sold.

PURCHASES OF MILK BY FAMILIES
PROPORTION OF FAMILIES IN EACH GROUP

Pints per Week (Approximate)	Percentage of Families		
	Western Section	Eastern Section	Whole Area
0	4	13	7
3½	20	34	25
7	24	28	25
10½	23	14	20
14	16	7	13
17½	7	2	6
21	3	2	3
23 and over	2	–	2
	100	100	100

To show that half the families purchase quite small quantities of milk is not to show all the difficulties of the retailer. Not only is he troubled by competitors in the same road, but also in the same house and family. Thus whilst the average purchase per family is 8.69 pints for the whole area, the average sale per dairyman is only 8.19 pints. If families purchasing no milk are excluded, the average purchase per family is 9.2 pints. Within this area of eighteen streets there are fourteen shops registered with the Medical Officer of Health as selling milk. None of the roads is a main road. Most of the shops sell the milk in cartons, and sell it as a grocer's, rather than a dairy commodity. Six sell the milk loose, and three of these six have considerable rounds in the area. In this area of eighteen streets, no street has fewer than four suppliers. Twenty-two different distributors are recorded in one road of 237 families, whilst another road of only 133 families has 16 milkmen.

A marked feature is that there are most suppliers in those roads which enter directly into the main road; possibly suppliers feel it worth while making a call in the road if they pass the end of it. The complete list gives 28 suppliers for 2,542 families. There is certainly an enormous waste here, but it seems that the waste is paid for more by the small supplier than by the ultimate consumer. If 75%

of the smaller distributors were abolished there seems no reason to suppose that the costs of milk distribution for the other 25% would be materially reduced, and less to suppose that any small reduction would be passed on to the consumer.

In most roads about 60% of the milk is provided by two distributors and 90% by four. Throughout the whole area 60% of the milk is supplied by two dairies, divided fairly evenly between them. None of the other dairies serve so generally over the whole area, but specialise on particular sections. Because of this territorial specialisation the third dairy provides but 12% and the fourth but 6% of the milk sold in the whole area. The first dairy is chief supplier in twelve roads, the second in four and the third in two. Only four dairies ever occupy either of the first two positions with regard to sales in any of the eighteen roads. Eleven occupy one of the first four positions.

To limit the number of distributors to a maximum of four in any road would cause such a small increase in the sales of those four as to have an almost negligible effect upon costs. To limit the number to two in this area would increase the sales of the two largest distributors by 66%; but one is not convinced that even to give the whole road to one distributor would materially reduce the large distributor's costs. With the largest distributor only a small portion of the roundsman's time is taken in covering the actual length of road; most is taken in going from door to door, in bringing the customer to the door and engaging her in conversation.

In one respect only does it seem probable that giving a particular area completely to one milkman would materially reduce costs, and that is in preventing people buying from two or more distributors. In this area 11% of the families bought from two or more distributors; in Oxford Dr. Murray found nearly 15% dealt with two dairymen.[1] This seems a complete waste, and probably its abolition would reduce distributive costs by 10%, say by at least 1d. per gallon. In Oxford the average weekly purchase was recorded as 13 pints per customer[2]; in Battersea it was little over eight pints per customer, and two suppliers per family meant most often the sale of half-pint bottles instead of pint ones. It seems a waste from the customer's point of view, too, with an extra visit to the door every day, though there might be an advantage in receiving the milk at the exact hour one needs it.

---

[1] K. A. H. Murray, *Milk Consumption*, p. 37 (87 out of 587 households).

[2] *Ibid.*, p. 37 (662 customers, 8,610 pints).

The reasons people buy from two suppliers seem compassionate; they are either loyalty or a desire to "make work". Loyalty to an old supplier will prevent a complete change from being made, and the family becomes a relatively poor customer to two dairymen. In one case the householder had been given a free tea by the proprietors of a dairy, after which she agreed to get some milk from them, which she now does as well as from her old supplier. Rarely do people buy from two suppliers for convenience, but it is a mixture of convenience and loyalty which makes a person continue to get some milk from an old supplier after removal to such a distance that he cannot make two deliveries per day. In such cases an early morning delivery will be obtained elsewhere.

If the larger dairies make no excessive profits, how do the smaller dairies manage? The answer seems to be that the roundsmen work exceptionally hard, often on their own account, the milk round being the work of the men of the household and the shop of the women. In these cases the minimum rates of pay prescribed by the Trades' Board for the Milk Distributive Trade do not apply. If roundsmen are employed at all these tend to be youths at a much lower rate of pay than men. "Considerable economies in delivery are effected by some firms by means of the employment of boys between 14 and 16 years of age."[1]

In many ways these small distributors are at a disadvantage. The (Cutforth) Reorganisation Commission points out that the Milk Marketing Board policy has favoured the larger distributors by allowing them a rebate on any milk they fail to sell in the liquid market. In addition lack of cash reserve has made many of the smaller distributors buy, not directly through the Board, but from wholesalers, thus introducing extra middlemen whose remuneration they have to pay. But in addition the efficiency of busy pasteurising plants has also encouraged the big distributors, and that is a real economy.[2]

---

[1] Ministry of Agriculture and Fisheries, Economic Series No. 38. *Report of (Grigg) Reorganisation Commission for Milk*, pp. 62 and 63.

[2] Ministry of Agriculture, Economic Series No. 44. *Milk. Report of (Cutforth) Reorganisation Commission*, pp. 92-94.

The smaller retailers have also other difficulties. Perhaps the chief is removals. With a large dairy a removal often means but a transfer from one roundsman to another ; with a small dairy it is much more likely to mean the complete loss of a customer. Even if the incoming tenant is not already a customer of one of the large distributors, she is likely to go to a dairy with a well known name. The small dairyman has to decide whether it is worth while to follow his old customer, and often he decides it is. This following of customers is probably the reason for the large number of dairies doing insignificant proportions of the business in many roads. Many of these small distributors sell in the area of most of their sales from a " pram ", but conclude their rounds by distributing in outlying sections by means of bicycles, carrying the milk on carriers over the front wheels.

Some of the smaller distributors have difficulty as a result of losing bottles. A stray bottle from a small distributor rarely finds its way back to him, which may make him dubious about selling a half-pint casually in the street. However, some of the small distributors get over the difficulty by using bottles which do not belong to them.

On the whole the small dairies are giving way to the larger ones ; one went out of business in Battersea whilst this survey was being undertaken. If the fixed minimum price for milk were removed it might be to the benefit of these small distributors. For these small distributors to cover the length of road on the round does take a considerable portion of the time of the roundsman, and a compact round would produce a considerable saving. Such a compact round might be obtained by reducing the price of milk ; and the large dairies, already having compact rounds and rigid wage costs controlled by a Trade Board, might find it impossible to reduce prices.

While the cost of milk distribution cannot be materially cheapened by giving one dairyman the monopoly in a specified district, such a monopoly might enable the dairy to distribute milk in a simpler way, and a simpler service ought to reduce costs. The danger of this is the difficulty of ensuring that the benefit of reduced costs is passed on to the consumer. The Cutforth Commission recommend that " the choice between relatively cheap milk with a simple distributive service, and dearer milk with a more elaborate service should rest with the consumers."[1] There seems to be scope for some undertaking to arrange a simple distributive service at a price of one penny per quart below the present price. This service should only be available to householders willing to place a standing order for quantities of milk in multiples of one pint, there being only one delivery per day. It is important that there should be no need for roundsmen to waste time bringing people to the door, or when at the door in conversation with them. Payment should be weekly. Half-pint bottles should not be available on this special service. Those people who desire to buy conservations from their milkmen, who want two deliveries per day and the luxury of irregular variations in consumption ought still to be able to obtain their desires by paying for them at an enhanced price.

DISTRIBUTION OF MILK BY ROADS

Road	Number of Families	Number of Milk Distributors	Percentage of Milk distributed by	
			Two Suppliers	Four Suppliers
A	133	16	78	87
B	99	10	80	88
C	190	15	52	77
D	224	11	74	90
E	173	9	59	87
F	68	8	63	88
G	38	4	65	100
H	72	7	76	97
I	95	6	70	96
J	56	4	74	100
K	43	5	69	99
L	304	18	57	81
M	161	16	63	88
N	237	22	53	80
O	60	7	63	93
P	127	10	64	90
Q	198	13	53	85
R	264	17	46	73
All	2,542	28	60	78

N.B.—The two or four distributors are the two or four who sell most milk in that particular road. These distributors differ somewhat from road to road.

Roads A to M constitute the Western, and roads N to R the Eastern Sections of the survey area.

---

[1] Ministry of Agriculture, Economic Series No. 44. *Milk. Report of (Cutforth) Reorganisation Commission*, p. 235.

MILK DISTRIBUTORS

Distributor	Western Section		Eastern Section		Whole Area		
	Number of Customers	Pints of Milk per Week	Number of Customers	Pints of Milk per Week	Number of Customers	Milk, Pints per Week	
						Total	Per Customer
1	534	5,355	231	1,579½	765	6,934½	9·06
2	577	4,845	239	1,480½	816	6,325½	7·75
3	279	2,613½	1	7	280	2,620½	9·36
4	175	1,360½	7	47½	182	1,408	7·74
5	27	182½	123	869	150	1,051½	7·01
6	98	817½	10	55	108	872½	8·08
7	12	95	95	654½	107	749½	7·00
8	46	369½	0	0	46	369½	8·03
9	23	214½	8	42	31	256½	8·3
10	11	75	20	149½	31	224½	7·2
11	0	0	30	218	30	218	7·3
12	11	89½	18	114	29	203½	7·0
13	1	4	24	124	25	128	5·1
14	5	41	8	53	13	94	7·2
15	6	58	2	13½	8	71½	—
16	0	0	5	62	5	62	—
17	7	47	1	7	8	54	—
18	3	35	2	17½	5	52½	—
Sundry	12	108	14	100	26	208	—
Shops	7	49	27	142½	34	191½	—
Total	1,834	16,359½	865	5,736	2,699	22,095½	8·19
Average sales per Customer	—	8·92	—	6·63			

N.B.—Under "Shops" are included only those customers who stated that they bought milk regularly at shops, and not those who used shops only if they happened to run short of milk.

MILK DISTRIBUTORS

Distributor	Pints per Customer per Week		
	Western Section	Eastern Section	Whole Area
1..	10·0	6·8	9·1
2..	8·4	6·2	7·8
3..	9·4	—	9·4
4..	7·8	6·8	7·7
5..	6·8	7·1	7·0
6..	8·3	5·5	8·1
7..	7·9	6·9	7·0
8..	8·0	—	8·0
9..	9·3	5·2	8·3
10..	6·8	7·5	7·2
11..	—	7·3	7·3
12..	8·1	6·3	7·0
All Distributors..	8·9	6·6	8·2

The End of Marginal Utility: A Note on Dr. Bernardelli's Article

By PAUL A. SAMUELSON

Recently in this Journal,[1] Mr. H. Bernardelli advanced certain arguments purporting to resurrect the theory of marginal utility in a modified form. In particular, he suggested that the following three postulates

$$\text{I.} \quad \frac{\partial \phi(x_1, x_2, x_3, \ldots, x_n)}{\partial x_i} > 0$$

$$\text{II.} \quad \frac{\partial^2 \phi}{\partial x_i^2} < 0$$

and

$$\text{III.} \quad \frac{\partial^2 \phi}{\partial x_i \partial x_j} \text{ always definite in sign}$$

be replaced by an allegedly less objectionable set

$$\text{Ia.} \quad \frac{\partial f(x_1, x_2, x_3, \ldots, x_n;\ h_1, h_2, h_3, \ldots, h_n)}{\partial h_i} > 0$$

$$\text{IIa.} \quad \frac{\partial f(x_1, x_2, x_3, \ldots, x_n;\ 0, 0, \ldots, h_i, 0, \ldots 0)}{\partial x_i} < 0$$

$$\text{IIIa.} \quad \frac{\partial f(x_1, x_2, x_3, \ldots, x_n;\ 0, 0, \ldots, h_j, 0, \ldots, 0)}{\partial x_i}$$

always definite in sign, where

$$\phi = \phi(x_1, x_2, x_3, \ldots, x_n)$$

is one cardinal index of utility, and f is defined to be

$$f(x_1, x_2, \ldots, x_n;\ h_1, h_2, \ldots, h_n) \equiv \sum_j \frac{\partial \phi}{\partial x_j} h_j + \tfrac{1}{2} \sum_{i,j} \frac{\partial^2 \phi}{\partial x_i \partial x_j} h_i h_j + \ldots\ldots +.$$

It is well known that Postulates II and III of the first set are not invariant under a monotonic transformation of the utility index of the form

$$\Phi = \Phi(\phi), \qquad \frac{d\Phi}{d\phi} > 0$$

It is this objectionable feature which the new definitions are believed to avoid. It is the intention here to indicate briefly that a more careful examination of the economic and mathematical implications of the new postulates must reveal that Postulates IIa and IIIa are open to the same grave objections as II and III, and that far from clearing the way for the reintroduction of uniquely defined decreasing marginal utility and complementarity, the new definitions leave matters just where they were.

---

[1] H. Bernardelli: "The End of the Marginal Utility Theory?", ECONOMICA, May, 1938.

Concretely, it is easy to demonstrate that IIa and IIIa of the second set are *not* invariant under a monotonic renumbering of the indifference loci. The fact that they are invariant under Mr. Bernardelli's proposed monotonic transformation

$$\psi(f) \qquad\qquad \frac{d\psi}{df}>0$$

is of no particular relevance to the economic problem of consumer's behaviour.

We may rewrite f in the obviously identical form

$$f(x_1, x_2, \ldots, x_n;\ h_1, h_2, \ldots, h_n) \equiv \phi(x_1+h_1, x_2+h_2, \ldots, x_n+h_n) - \phi(x_1, x_2, \ldots, x_n)$$

Hence, corresponding to ϕ we have f; corresponding to Φ we have

$$F=\Phi(x_1+h_1, x_2+h_2, \ldots, x_n+h_n) - \Phi(x_1, x_2, \ldots, x_n)$$
$$=\Phi\Big[\phi(x_1+h_1, x_2+h_2, \ldots, x_n+h_n)\Big] - \Phi\Big[\phi(x_1, x_2, \ldots, x_n)\Big].$$

It remains only to compute the various coefficients of Ia, IIa and IIIa to determine the effect of this transformation upon them. Performing the indicated differentiations, we find

$$\frac{\partial F(x_1, x_2, \ldots, x_n;\ h_1, h_2, \ldots, h_n)}{\partial h_i} \equiv \frac{d\Phi}{d\phi}\cdot\frac{\partial f}{\partial h_i}$$

$$\frac{\partial F}{\partial x_i} \equiv \overline{\left(\frac{d\Phi}{d\phi}\right)}\frac{\partial f}{\partial x_i} + \int \frac{d^2\Phi}{d\phi^2}\,\sum_j \frac{\partial \phi}{\partial x_i}\frac{\partial \phi}{\partial x_j}\,dh_j$$

where $\overline{\left(\frac{d\Phi}{d\phi}\right)}$ indicates that this expression is to be evaluated at some point intermediate between $(x_1, x_2, \ldots, x_n, 0, 0, \ldots, 0)$ and $(x_1, x_2, \ldots, x_n, h_1, h_2, \ldots, h_n)$, and where the indicated line integral is taken between these same limits of integration. The above two expressions are valid for all values of the x's and h's, and hence for the special cases indicated in Ia, IIa, and IIIa.

Contemplation of these expressions reveals that the coefficient in Ia is invariant in sign under a monotonic transformation of utility index; however, a suitable transformation can result in increasing marginal utility and contradictory complementarity due to the arbitrary element in the second term. Thus, the new definitions, IIa and IIIa, are open to precisely the same objections as the old ones. By working through the details of the example in Mr. Bernardelli's Appendix, one can verify the truth of these remarks.

I am very much afraid, therefore, that the answer is yes to Mr. Bernardelli's question, and that the text-books still need that rewriting which he hoped so much to avoid.

A Reply to Mr. Samuelson's Note

By H. BERNARDELLI

I AM pleased that Mr. Samuelson's above remarks provide me with an opportunity to stress once more a point of my article which, owing to difficulties of the subject, perhaps, or obscurities of my diction, seems to be easily misapprehended.

In the appendix to my article I tried to explain how the function $f(x\,;\,h)$ which I proposed to introduce as an index of total and marginal utility can be linked up with the traditional utility function $\phi(x)$ simply by putting

$$f(x\,;h)=\frac{\partial\phi}{\partial x}h+\frac{1}{2}\frac{\partial^2\phi}{\partial x^2}h^2+\;.\;.\;.\;.^{1}$$

Here Mr. Samuelson comments: "We may rewrite $f(x\,;\,h)$ in the *obviously identical form* (my italics)

$$f(x\,;h)=\phi(x+h)-\phi(x)."$$

May we really? The function $f(x\,;h)$ in my notation stands for the marginal utility of an increment h, whereas $\phi(x)$ in the old notation signifies total utility. Mr. Samuelson's rewriting, therefore, amounts to representing marginal utility as the *difference* of the total utilities $\phi(x+h)$ and $\phi(x)$.

Now the very essence of my article, it will be recollected, was to demonstrate that such a representation of marginal utility is inadmissible. All the arguments in the article (as distinct from the appendix) were centred round the thesis that it is this and only this conception of marginal utility as a difference of total utilities which causes the muddle of the measurability dispute. It does not make sense psychologically to put, as Mr. Samuelson proposes,

$$\phi(x+h)=\phi(x)+f(x\,;h),$$

because this operation of summation of parts contradicts the nature of the intensive magnitudes with which we have to deal. All Mr. Samuelson does is, therefore, to re-introduce the same erroneous assumption which it was the whole purpose of my article to expose as the source of all the fallacies and to eliminate from Economics. Surely he cannot blame me, if in this way he arrives at consequences which lead straight back into the old dilemma.[2]

---

[1] There are, incidentally, many other ways of aehieving this end.

[2] Only with the aid of this assumption is Mr. Samuelson able to conclude that $f(x;h)=\phi(x+h)-\phi(x)$, if transformed, becomes $F\left\{f(x;h)\right\}=F\left\{\phi(x+h)\right\}-F\left\{\phi(x)\right\}$ *instead of* $F\left\{f(x;h)\right\}=F\left\{\phi(x+h)-\phi(x)\right\}$.

One has to be clear as to what the introduction of utility index functions into Economics really means. The problem is one of finding a way of submitting certain psychological magnitudes to a form of calculus that permits the derivation of the equilibrium equations without involving operations inconsistent with their nature as intensive magnitudes. This problem can be solved, because the intensive magnitudes have in common with the continuum of real numbers a certain limited amount of properties which make it possible to establish a correspondence between the two fields and to use functions as indices of utility. In doing this it has to be borne in mind, however, that, apart from the properties referred to, the real numbers possess *other* properties which have *no counterpart* in the psychological field. They are subject, e.g., to the axioms of distance which enable one to calculate differences and to carry out additions; in the field of intensive magnitudes such axioms and operations have no meaning.

The measurability dispute in Economics arises, as I have proved in my article, from an unwarranted transference of operations which are possible only with numbers to the field of psychological magnitudes and their indices.

Though the intensive magnitudes do not possess all the properties owned by real numbers they do not entirely defy mathematical treatment. I have shown that it is possible to restrict the calculus of utility index functions to operations that have a definite psychological meaning.

Mr. Samuelson himself has to admit that the first-order derivatives of the index-function $f(x\,;\ h)$ which I suggested should be used are invariant under a monotonic transformation $F(f(x\,;h))$, $F' > 0$. He only declares laconically that this "fact . . . is of no particular relevance to the economic problem of consumer's behaviour." It is to be regretted that he has not added any tangible reasons for this ruling.

Book Reviews

National Income and Capital Formation, 1919–1935: A Preliminary Report. By SIMON KUZNETS. National Bureau of Economic Research. New York: Macmillan. 1937. 86 pp. $1.50.

Studies in Income and Wealth. Volume I. By THE CONFERENCE ON RESEARCH IN NATIONAL INCOME AND WEALTH. National Bureau of Economic Research. New York: Macmillan. 1937. 348 pp. 10s. 6d.

The first of these volumes contains estimates of the National Income of the United States for each year from 1919 to 1935. The data on which the totals are based and the methods of estimate are not to be found here, but the sources are briefly described in the Foreword and will appear, or have appeared, in other publications. That a great deal depends on data and method and definition can be seen by comparing the figures here with those in the Survey of Current Business, U.S. Department of Commerce, June, 1938.

	KUZNETS.		SURVEY.	
	Gross National Product	National Income	Income Produced	Income Paid Out
	Millions of dollars.			
1929	93,640	83,424	81,128	78,556
1931	64,751	56,010	53,822	62,032
1935	61,243	53,035	55,186	55,137

National Income is defined as the value of all commodities and services produced during the year, less the value of commodities consumed in the process of production, and therefore is on familiar lines. Gross National Product "includes also the value of durable capital goods consumed in the process of production, and correspondingly includes gross savings of enterprises rather than net".

Both Gross and Net Income are classified according to their source—Agriculture, Mining, &c.—and according to their recipients—wages, dividends, rents, &c. Corresponding analyses are made in the "Survey," with broadly the same results. But in some cases it is difficult to imagine why apparently the same categories differ so much. For example we have for the year 1935 :—

KUZNETS. Income payments to individuals. Million dollars.		SURVEY. Income paid out. Million dollars.	
Employees ..	41,631	Employees ..	36,679
Entrepreneurs ..	5,994	Entrepreneurs ..	8,729
Dividends ..	2,845	Dividends ..	3,038
Interest	4,445	Interest	4,725
Rents	1,323	Rents, royalties	1,917
Total	56,238	Total	55,088

Here Kuznets includes among employees income " withdrawals by entrepreneurs in service and miscellaneous ".

The Section on Capital Formation is too detailed for summary. It, of course, depends primarily on the value of the product of goods, buildings, machinery, &c., that are necessarily designed for permanent or semi-permanent use. It also includes the more difficult category of " change in business inventories ". In a variant estimate the " flow of consumers' durable commodities " is added.

In all cases the estimates are re-stated in terms of 1929 prices. The method of allowing for change of prices is briefly described, but mainly by reference to Bulletins already published. For the dates of maximum and minimum we can deduce the following percentages.

	NATIONAL INCOME.	
	At Current Prices.	At 1929 Prices.
1919	72	67
1929	100	100
1932	47	58
1935	64	76

Thus the great reduction to 1932 is diminished by the price correction. Over the sixteen years apparent, or dollar income, fell, but real income, thus computed, rose. With the rapid increase of population, however, real income was 6 per cent. lower per head in 1935 than in 1919.

The reasons for the discrepant estimates of national income can be appreciated by reading the second book under review. This is of the nature of symposia on eight subjects by representatives of several Universities in Conference. The familiar difficulties in definition are lucidly discussed by persons who have had to face them and find some solution. It was hardly to be expected that substantive conclusions would be reached, but at least it is possible to identify the doubtful constituents of income, and obtain working definitions for framing estimates. The statistician's task is clearly to compute every item, so that there can be an assembly of the results to suit any definition to the limit of the power to estimate.

A particularly important Chapter is that on Accounting Methodology. If we depend on incomes of companies, as distinguished from individuals, we are at the mercy of the particular ways in which allowance for depreciation and reserves and the valuation of " inventories " are made. It is known that there are no generally agreed rules among accountants for this class of problem.

It is not possible to give an account of the handling of the innumerable problems that arise : we can only say that they have to be considered not only by those engaged in making estimates, but also by those who use the estimates. It is the duty of anyone who computes National Income to make as clear as possible the definitions of every constituent in his estimate.

A. L. Bowley.

Mathematical Analysis for Economists. By R. G. D. Allen. Macmillan & Co., Ltd. 1938. xv + 548 pp. 31s. 6d.

Economics is a quantitative science ; it needs statistics to prepare its data, and it needs mathematics in the construction of its arguments. As the science progresses, its reliance upon such assistance becomes more and more evident. For a long while nothing was wanted but the " little potted calculus " of Marshall, which could be got up by any intelligent person with very little trouble, and could even be concealed by the use of the word " marginal" from those who are frightened by the sight of a differential coefficient. But it was inevitable that this phase would come to an end. Even at present, the old equipment is amply sufficient for undergraduate work ; but it does not do much beyond, and it is getting harder and harder to do pioneer work in economic theory without having something better at one's disposal.

In these circumstances, there will be many people who will be very grateful for Mr. Allen's book. Unlike earlier attempts of apparently the same sort, it does not confine itself to the " potted calculus ". That is provided, of course ; but even that is done with exceptional care, the foundations of the calculus being laid with a very reasonable degree of rigour. This is sound policy, for the logical foundations of the calculus (continuity and so on) do cause trouble to the student of economics, just as they troubled that early economist —Bishop Berkeley—two hundred years ago. Altogether, Mr. Allen's attention to these quasi-philosophical considerations gives a tone to the whole book, and makes it far more interesting reading than it would have been otherwise.

This is only the first part of his undertaking. Quite beyond these things, he endeavours to provide an introduction to the mathematical apparatus of modern economics, to the much stiffer mathematics involved in the researches of the last ten or fifteen years. This must have been a far harder job, but it is of course the most important part of the book. Certainly nothing at all like it can be found anywhere else.

Nevertheless, just because it is here that Mr. Allen is at his most interesting and most adventurous, it is here also that he gives most opportunities to the critic. The economics in whose study he seeks to assist is, for the most part, very recent economics, and one cannot be sure how well it will stand the test of time. Is it not likely that in several cases easier lines of approach will be discovered, which will make some of the more elaborate mathematics unnecessary ? Can one be sure that the further development of economic theory will proceed in this particular mathematical direction, and not in others—for example, in fields that lie more on the borderland of statistics, or in that of dynamic differential equations and oscillatory motions, much explored by the econometrists, and only touched on slightly by Mr. Allen ? (I feel myself that a couple of chapters on Probability would have been so useful in this book ; the mathematical economist neglects mathematical statistics at his peril.) But of course all this means is that while mathematics may be immortal, mathematics for economists cannot count upon longevity ; the sort of mathematics we need is likely to change as time goes on.

A very considerable portion of this second part deals with that particular department of mathematical economics in which Mr. Allen himself has done most original work—the theory of related goods and related factors. Scattered about in several chapters, one can find a fairly comprehensive treatment of this subject (apparently it had to be divided up in order to fit the general arrangement of the book, though the division is rather to be regretted). Since this subject is one to which I have myself devoted a good deal of attention—to some extent in collaboration with Mr. Allen—I feel some diffidence in referring to it here. But I should say that these sections contain Mr. Allen's generalisation of our joint article on Value (ECONOMICA, 1934), and should explain that his generalisation is quite independent of my own parallel attempt at generalisation, which has been published in my pamphlet *La Théorie mathématique de la Valeur* (Paris, Hermann), and will appear in another form in my book *Value and Capital*, which is in the press. There are some differences between Mr. Allen's work and my own, in these further stages, arising mainly from the fact that he concentrates attention upon the case of a linear and homogeneous production function (constant returns to scale), while my own investigations, though they started with this case, have ultimately led me to prefer the method of treating constant returns to scale as a limiting case, and adjusting my definitions of substitution and complementarity among factors accordingly. Others will have to judge which of us has chosen the right way; I am only concerned here to point out the difference.

Almost all the criticisms which one can make of this excellent and nearly impeccable work are matters of opinion; I have only noticed one thing which can be called a slip. At the bottom of p. 362, Mr. Allen makes the entrepreneur maximise, not his net profit, but his *rate of profit* (ratio of profit to cost). Surely this is wrong. The ravel does not go far, but it is perhaps an example of the fallacies into which preoccupation with the *limiting case* of constant returns to scale is liable to lead even the most careful writers!

J. R. HICKS.

Economics. By FREDERIC BENHAM. Sir Isaac Pitman & Sons, Ltd. 1938. xv + 488 + 31 pp. 7s. 6d.

Teachers of economics naturally approach every new text-book with a bias determined partly by their own attitude to the subject and partly by their view of the manner in which it ought to be presented to students. Most teachers, therefore, will probably have some criticisms of detail to make of Dr. Benham's book; but there are few who will not commend it as the most satisfactory introduction that has appeared for a very long time. It is intended primarily to satisfy the needs of University and other students. Its character, however, is such as to make it useful not merely for them, but also for the serious general reader who wishes to acquaint himself with the methods of the science and to learn " how the economic system works to-day in a country such as Great Britain ".

The writer of a good text-book in any field must possess an imaginative grasp of a beginner's difficulties. If he is dealing with economics, he must, in addition, be fully aware of the resistances that have to be overcome before readers (especially the more mature readers), already possessed of certain prejudices and opinions about economic affairs, are willing to be led along the path of knowledge. The theoretical constructions which lie at the heart of economics must take first place in such a book; but if they are presented in all their nakedness, they often repel the ordinary student and, still more, the general reader, by their apparent dissociation from the " real world ". Even for students who have a bent towards abstract reasoning, the purely theoretical text-book has its dangers, since it may cause them to think that a knowledge of theoretical constructions alone can give them an insight into the world with which economics deals. This difficulty is not overcome merely by including in a predominantly theoretical work chapters descriptive of particular economic institutions; for the working out of economic principles in actual life must be demonstrated at each stage of the argument. This method of combining abstract analysis and description certainly involves some sacrifice of logical continuity; but it is a sacrifice that is well worth making. Dr. Benham has been strikingly successful in achieving the balance that is needed. For instance, at the beginning of the book, after he has explained the nature of the economic problem and the mechanism of the price system, he passes to a realistic acccount of the markets in which that system operates. And subsequently, at every step in his argument and whenever he introduces a concept which a beginner may have difficulty in understanding, he provides copious illustrations which usually have the important merits of freshness and topicality. These efforts to ensure that every point shall be clearly comprehended have resulted in a very long book; but this cannot be avoided in a survey that aims at being complete. Conciseness which is a merit in a monograph leads only to obscurity in a text-book.

Teachers will be indebted to Dr. Benham for taking account of the important theoretical advances that have recently been made and for presenting such comparative novelties as imperfect competition and the theory of opportunity costs in terms which the elementary student will find easy to understand. A text-book writer who wishes to substitute the up-to-date for the old-fashioned or traditional technique must exercise considerable powers of discrimination if he is to avoid an elaborate discussion of theories or topics which happen to be fashionable but which in the long run are unlikely to be of major importance; and there are books which, though ostensibly designed for elementary students, have served rather to demonstrate the authors' ingenuity, knowledge or originality to their fellow-economists. Dr. Benham, however, has given his readers nothing which they will find superfluous in their efforts to understand the economic system, although the reviewer is doubtful whether the study of indifference curves (*see* Appendix to Chapter VI) can be usefully undertaken by beginners. The recent changes in policy and practice within the spheres of money and international trade are fully discussed and evaluated, and the chapters in which these subjects are examined will be warmly welcomed by students, for the corresponding sections of the older text-books seem to present them with a picture of a quite unfamiliar world.

Few adverse criticisms of major importance can be made of the book. Such defects as it may possess are of style and emphasis rather than of substance. To some teachers the treatment of certain topics may seem a little "sketchy". It is not to be expected, of course, that in a book with so wide a scope all the problems which are raised should be fully discussed. Where comprehensiveness is impossible, however, the elementary student should be left with a problem defined rather than with an assured conclusion. Yet Dr. Benham occasionally gives his judgments an appearance of finality that is scarcely warranted by the nature of the problem. For instance, on page 276, in his brief reference to the saving performed by joint stock companies, he states that if a majority of shareholders dislike the company's policy of building up reserves out of profits they can prevent it, while individuals who object can sell their shares. Hence, he concludes, the saving performed by these companies reflects the desires of the individual shareholders. Actually, of course, this issue is highly complicated and cannot be dismissed so easily. A more serious deficiency, in the reviewer's judgment, is to be found in Dr. Benham's treatment of the part played by the State in economic life. When he is dealing with particular problems, such as State intervention in international trade, he is informative and stimulating; but he has little to say about the general problem. Indeed, his chapter on the State is largely confined to public finance. Now it is true that he is examining a society in which "the consumer is king". Yet the consumer in all modern societies is rapidly becoming a very much limited monarch. Even in democratic countries a great deal of the organised activity of individuals, in their capacity as citizens or as owners of the factors of production, is being directed towards preventing or modifying the consequences which result from the activities of those same people as consumers. It is important that the student should know something of the nature of this conflict and of its momentous economic results, especially as his appetite for discussions of this kind is nowadays likely to be very keen. Because people differ in their view of what the economic functions of the State should be (page 297), or because no definite answer to this question can be given within the economist's own chamber of reference, the economist is not thereby justified in treating the problem in a cursory manner, for he has a contribution to make to its solution or at any rate to its definition.

Yet when all these inevitable disagreements about emphasis are taken into account, one is left with a feeling of admiration for the way in which Dr. Benham has discharged his very difficult task. Newcomers to economics will be grateful to him for having provided this sound and lucid guide to their studies, and teachers will be under an obligation to him for having substantially eased their labours.

G. C. ALLEN.

Modern Banking. By R. S. SAYERS. Oxford University Press. 1938. xi + 316 pp. 12s. 6d.

Though this book is presumably designed primarily for the undergraduate university student, it may be recommended to any reader who wishes to lay the foundations of a knowledge of the principles of modern banking. It falls naturally into two parts. The first seven chapters are devoted to an exposition of the broad principles of the structure and working of modern banking systems, illustrated mainly by references to the British system, but with a short discursus on the United States and still briefer glances at certain other countries. This part of the book should be especially useful to beginners. Mr. Sayers is not afraid to take plenty of space in order to make his exposition clear, and his method of illustrating banking movements by means of series of simplified balance sheets of the Bank of England and the clearing banks should enable the beginner to follow the precise effects of changes about which even advanced students are not always completely clear.

Considering how debatable are many of the points touched upon, it is remarkable how well Mr. Sayers manages to keep his discussion within the limits of general, if not universal, agreement, though by no means everyone would agree with his description in Chapter 6 of the trade cycle in terms of the " Multiplier ". In particular, his views are not quite clear on the question of whether an increase in voluntary saving hastens or postpones the onset of a trade recession. In the footnote on page 161 he appears to incline to the former view, and on page 281 to the latter.

A serious omission in the first part of the book, only partially rectified later, is any reference to quantitative or qualitative restriction of bank advances. The impression is left that the banks maintain their standards of security and liquidity unchanged whatever their cash position, and rely entirely on the effects of interest changes and on changes in their security holdings for the adjustment of their ratios. This is certainly not true of some countries and probably not true of any. In times of financial stringency some would-be borrowers from the banks find that not only have they to pay a higher rate of interest, but also that the advances they can obtain are neither so large nor for so long as in times of financial ease. This is not only because the borrowers' own assets have fallen in value or their earning prospects become impaired, but also because in times of stringency the competition between banks for advances is less intense. Since interest rates are largely fixed by custom or agreement between banks, competition tends to result, in times of financial ease, in some relaxation of the other conditions of bank loans. But when a stringency develops, a bank manager can insist on terms which he regards as fully satisfactory without so much risk of losing the account to competitors. Managers, indeed, often find a period of stringency a by no means unmixed disadvantage, as it gives them an opportunity to enforce adjustments in unsatisfactory accounts without running the risk of a reprimand from Head Office for losing business.

The second half of the book is suitable for more advanced students. It deals clearly and concisely with a number of questions of present importance, including the contrast between the pre-war and the post-war gold standard, the working of Exchange Equalisation Accounts, the behaviour of banking systems in the trade cycle, and the finance of government expenditure by the banks. A particularly useful section is devoted to the historical and practical reasons which lie behind a bank's choice and distribution of assets. There is one point here on which one would like further information. Mr. Sayers cites an unpublished thesis by Mr. R. M. Godwin, of Oxford, which contains a detailed analysis of ten years of recent British banking statistics. It would be interesting to know whether his researches bear out the contention, recently advanced in some quarters, that the banks regard short-term assets—bills and money at call—as substitutes for cash, or whether they are merely prepared to hold a smaller proportion of cash against such part of their liabilities as are also covered by short-term assets ; in other words, whether the banks would be prepared to see a rise in the ratio of advances and investments to cash as their holdings of short-term assets rose.

Another most interesting chapter is one which deals with the special difficulties of making central control effective in countries where the absence of an effective money market precludes or limits open market operations (or, Mr. Sayers might have added, where the liquid assets of the central bank consist wholly of gold and foreign exchange). In such conditions, he considers, control might conceivably be exercised by varying the size of the government deposit with the central bank ; but to ensure control in all circumstance the central bank should be given power to vary the minimum legal reserve ratios of the commercial banks.

The book concludes with a brief note on the difficulties in case a government, and especially a socialist government, should wish to nationalise the banking system. There is a fairly adequate index, and the absence of a bibliography is largely compensated by frequent advice on further reading given in footnotes throughout the book.

F. W. PAISH.

A History of Economic Thought. By ERICH ROLL. London: Faber and Faber, Ltd. 1938. 430 pp. 12s. 6d.

Professor Roll has attempted to survey, in the space of about four hundred pages, the development of economic thought from the Old Testament to the present day. No one would deny the importance or the intrinsic interest of the subject, but one may doubt whether it is simple enough to be dealt with adequately in so short a space. Professor Roll's book unfortunately justifies this doubt.

Professor Roll's main object, as explained in the introduction, is to provide an introduction to economics for students that will give them some conception of the development of the subject and its connection with practical problems. He proceeds to survey the whole development of economic thought from what appears to be the standpoint of the materialistic interpretation of history, though he does not actually explain this to start with. The development of economics is displayed in terms of the successive ideologies of the dominating economic classes in each period, fashioned to maintain their position.

Unfortunately, however, Professor Roll appears to regard his underlying thesis as fully justified and does not attempt to meet the arguments that can be advanced against it. For example, at the end of an admirable summary of the development of the Canon Law he says, " The harmony between Church dogma and feudal society, which at the beginning of this section was said to have been responsible for the all-embracing quality of the Canon Law, came to an end with the decline of feudal society. Canonist thought was a ruling class ideology, an illusory representation of reality which pretended to find unity where there was none " (p. 55). Now as Professor Roll has already described the modification of the Christian prohibition of usury by the Canonist writers, to fit the facts of the expanding trade of the later middle ages, as one of the main features of the history of Canon Law, it seems a little unconvincing to say that Canon law was the ideology of the ruling class of the feudal system. The trading interest was certainly not the dominating class of the period, while the ruling landed class was not pre-occupied with the problems of usury. Professor Roll is very likely right but he does not appear to me to prove his point adequately. Similarly in his chapter on Mercantilism he explains (p. 64) that he disagrees with Professor Heckscher's identification of mercantilism with state-making. He himself takes the opposite view and regards the state as " the creature of the warring commercial interests " and mercantilist literature merely as the statement of those interests. On a matter as controversial as this, and so important to the main theme of his book, one might have reasonably expected that Professor Roll would discuss the matter at some length, but he makes no further reference to Professor Heckscher's thesis.

The same dogmatic attitude dominates the chapters on the classical and post-classical economists. All the economists after Ricardo, except the socialists, are treated in the familar way as though their sole purpose had been to justify capitalism. Professor Roll introduces the chapter on the economists between Ricardo and Jevons (chapter vii), by saying that as the conclusions of the English socialists and Marx were hostile to the capitalist system " there developed a movement which, starting from the classics, went in the direction opposite to Marxism. The task of the movement was to criticise the classical theory in those parts which offered opportunities for revolutionary interpretation and to develop a new theoretical analysis which would be a firmer basis for the main political conclusions of classicism . . . Fortunately for this movement, the classical theory did in fact contain many elements which contradicted those which Marx and others had taken as their starting point. It was only necessary to take these elements—which Marx had regarded as errors—and develop their implications ". Professor Roll apparently does not regard it as misleading to refer to Marx's development of the labour theory of value as though it had taken place early enough in the period between

Ricardo and Jevons to stampede other economists into an unnatural development of the utility theory, yet that is the impression given by the whole passage. He fails to appreciate, perhaps for this reason, the greater logical ease and consistency of the development of the utility theory, or the fact that, on his own showing (pp. 243–8) the English socialists, whose writings really belong to this period, did little to clear up the obscurities of Ricardo. Again Professor Roll's main thesis may be correct, but the way in which he supports it is both illogical and unhistorical.

There is not space to discuss Professor Roll's generalisations about the economists' attitude to social legislation. But it would have been interesting if he had gone into the question in more detail and discovered any major social legislation, other than the ten-hours bill, which was consistently opposed by the main body of economists.

Professor Roll deals with the later utility theorists in much the same way in Chapter viii. He regards the later development of the utility theory together with the methodological discussions as apologetic in nature and fundamentally as an attempt to absolve economists "from dealing with the social order at all" (p. 370). This chapter is, however, the most interesting in the book and many of his observations are very much to the point. Unfortunately again Professor Roll does not consider the opposite side of the case seriously. For example, he does not deal thoroughly with the argument that attempts to understand the working of the capitalist system, and to discover what economic laws are independent of the institutional environment, need not necessarily be biased attempts to find social or economic justification for the capitalist system.

Professor Roll may have considered that the limitations of space made it impossible to deal with such issues. But the fact remains that the main thesis from which he approaches the whole subject has not yet been proved to the general satisfaction of historians, economists or sociologists. In particular the results of recent historical research have done much to shake its foundations, as for example, Professor Heckscher's recent study of mercantilism. If Professor Roll had contended himself with a smaller programme, limiting himself to a reasonably brief period, he might have examined the evidence on both sides of the various controversial points involved and made an important contribution to the history of economic thought. As it is his book contains little of interest to reasonably well-read economists and is too dogmatic to be useful for students. This is a pity, as the gradualness and continuity of development of economic theory is shown throughout the book with admirable clearness and many of the summaries of economic theories are both lucid and well-arranged. In particular, Chapter iii, "The Founders of Political Economy," is one of the best short accounts of the forerunners of Adam Smith that I have seen.

MARIAN BOWLEY.

The Dollar : A Study of the New Monetary System. By J. DONALDSON. Oxford University Press. 1938. xix + 271 pp. $3.75. 16s.

The only drawback to this useful, and indeed important, book is that it leaves off too soon. Professor Donaldson sets out to examine the implications of American monetary policy, both in its domestic and its international aspects, from early 1933 to the autumn of 1936—from the suspension of the gold standard to the conclusion of the Tripartite agreement which was to inaugurate a new era of stability between the principal free currencies of the world. That brief period was crammed with monetary change and experimentation—the New Deal with its vast government expenditures, the reform of the Federal Reserve System, the dollar devaluation, the resort to changes in reserve ratios and gold sterilisation as a means of manipulating the volume of credit—to mention only a few of the outstanding developments. Taken together, Professor Donaldson reasonably contends, those changes constituted nothing less than a revolution in monetary technique. " Thus evolved the new American monetary machine . . . With throttles and brakes, with high, low and reverse gears, it differed considerably from the old monetary horse-and-buggy contraption ".

It was scarcely to be expected that even so thorough and detailed an investigation as Professor Donaldson's would yield any startling results, and indeed his conclusion is the familiar one that the practical effects of all this legislative tinkering and invention of new monetary gadgets has been largely nugatory, at least in the domestic sphere. As Professor Donaldson points out, the national income of the United States steadily declined during the very years when the Government's monetary policy was most actively expansionist. It is, in fact, quite striking to find how, time and again, expansionist measures aimed at monetary manipulation purely from the side of supply were completely voided by changes on the side of demand. " Money velocity remains one of the major unsolved problems in dollar policy." On the international side Professor Donaldson considers that the results of policy have been rather more according to plan. While admitting its essentially restricted and flexible character, he attaches considerable importance to the Tripartite agreement as a factor in currency stability. If his conclusions anywhere deserve criticism, it is that he tacitly underestimates the disruptive influence of America's " twenty-four hour " policy and unused margin of devaluation, which have made the relative stability of the past two years a precarious and purely retrospective one. Nevertheless, his system of combining " the descriptive, the theoretical and the empirical methods " yields an admirably complete survey of the period ; the book is of considerable value merely as a repository of readily accessible fact; while the theoretical sections form a concise and lucid, if not original, exposition of monetary doctrine. The trouble is, as has been said, that the period covered is too short. At the time the book was written it no doubt seemed reasonable enough to suppose that the Tripartite declaration would mark the climax of the period of experiment and usher in a new era of flexible but uneventful stability. As it turns out, the subsequent period has been no less eventful than the earlier one. It has seen the ill-fated Rooseveltian attempts at boom control through the manipulation of reserve ratios and loan regulations, the hasty abandonment of sterilisation in a desperate attempt to check business recession. Professor Donaldson's supercharged monetary machine, ineptly handled, has swerved violently from one side of the road to the other, often with its brakes and throttles and forward and reverse gears all working simultaneously and causing a most horrible jam. Hence the present book already cries out for a sequel. It is to be hoped that Professor Donaldson will decide to provide us with one.

W. M. DACEY.

Kakao: Wandlungen in der Erzeugung und der Verwendung des Kakaos nach dem Weltkrieg. By FRITZ KLOPSTOCK. (*Wandlungen in der Weltwirtschaft.* Heft 12.) Bibliographisches Institut, A. G. Leipzig. 1937. 184 pp. R.M. 8.50.

Dr. Klopstock's study of recent changes and tendencies in the production, utilisation, trade and marketing of the cocoabean forms a worthy successor to his earlier study of the tea trade. As in his earlier work, he deals comprehensively yet concisely with his subject, and brings together in convenient form the available statistics and information.

Much less accurate and detailed data are available for cocoa than for tea. Valuable accounts have been written of the cocoa industry of particular areas, for instance, of Trinidad, and on various technical aspects of the subject, but this is the first attempt to treat the subject on a world-wide basis, to analyse marketing organisation and methods, and to explain price trends.

Dr. Klopstock has had to contend with considerable deficiencies in the records and statistics relating to cocoa. There are no statistics of area under the cocoa-plant, nor of crops, so that estimates of production have to be based mainly on data relating to sales and overseas trade, whilst even the latter are incomplete. It is only recently that Cocoa Exchanges have been established elsewhere than in London, whilst trade figures are apt to be misleading, because some trade returns refer to raw cocoa, whilst others refer to cocoa partially prepared for the market. Dr. Klopstock found it particularly difficult to obtain information with regard to marketing methods and trade organisation, and it is noteworthy that some of the most valuable evidence of this type was obtained not from official or trade sources, but from legal reports. The author has undoubtedly made the most of his somewhat scanty material, and has been able at least to discern and sketch the outlines of his subject.

Cocoa is by no means the only important crop for which accurate statistics and detailed trade information are lacking. Many other important tropical products—for instance, oilseeds of various types—are in a similar position. It is to be hoped that Dr. Klopstock may eventually extend his studies to other important "colonial crops" and by revealing the extent—or lack—of information and statistics, will help to stimulate better recording.

In the meantime, owing to the limelight recently directed towards conditions in British colonial areas in general, and towards the dispute between native producers and European exporters of cocoa in the Gold Coast, in particular, Dr. Klopstock's study has become of "topical," as well as of scientific interest. His book was written at a time (1936) when serious tension was just developing in the Gold Coast, and he explains clearly the course of events which eventually led to the boycott by native producers. The cocoa industry is an interesting example of the victory of small scale "native" production over large-scale "plantation" production, and this explains the failure of past attempts at restriction of output, in contrast to the situation in the Rubber Industry, where the organisation of plantation production resulted in the imposition of restriction upon native rubber growers before the latter attained a predominant position. But it now appears that even the success of small-scale producers will not, in the long run, prevent the emergence of monopolistic conditions, although the monopolistic pattern will be different. The recent report on the boycott in the Gold Coast recommends the introduction of co-operative marketing, and although it formally condemns the price-fixing methods of the exporters' pool, it is clear that what is contemplated is an agreement between organised producers confronted by organised exporters, rather than any approach to a free market. At the same time proposals for an agreed restriction in Trinidad and Venezuela are under consideration, with the idea of preparing the ground for a World Cocoa Conference, and hence for a comprehensive scheme of restriction. In conclusion it can be said that although important developments have occurred since Dr. Klopstock completed his book, his work provides a valuable background, and sets forth clearly the basic facts which must be realised if the present situation is to be fully understood.

VERA ANSTEY.

Expectations, Investment and Income. By G. L. S. SHACKLE. Oxford University Press. 1938. 119 pp. 7s. 6d.

The applicability of short period equilibrium methods to the analysis of the Trade Cycle is limited by the fact that while expectations may be treated as data for very short periods, they are liable to change during the course of the cycle. The student of the Trade Cycle, unable to accept the constancy of expectations, thus has to explain "why" expectations change. In grappling with this problem, Dr. Shackle (as everybody else) has found no great difficulty in explaining the optimism of the boom and the pessimism of the depression. Investment creates incomes and unexpected profits which give rise to further investment etc.: this has, indeed, become a familiar tune.

The real trouble begins with the explanation of the "turning points", Crisis and Recovery. Here Dr. Shackle—more anxious, it seems, to convince us that he knows the correct theory than to convince us of the correctness of this theory—employs the novel device of advancing two theories in order to explain the same phenomenon. The reader is thus offered a choice between a "technical" and a "psychological" theory of crisis.

The former simply says that a high level of investment activity such as characterises the boom cannot be maintained, because business men after having had a strenuous time sometimes need a rest, "a pause in which to consolidate the advance" (p. 100), and the new plants have to be fitted into the industrial system. Every "extension phase" is thus followed by a "testing phase". As to the question why the extension phases of all enterprises should coincide to the extent of making investment booms an intermittent phenomenon all we are told is that "it is evident that if the required pause for consolidation of each business is longer than the time which elapses between the beginning of such a boom and the completion of improvements by the last businesses to undertake them a drop in investment must follow." (100.) "The investment-fever comes to an end, in fact, for exactly the same reason that an influenza epidemic does: because everybody has had it and has not yet lost a temporary immunity." (101.) This theory, germane as it is to investment in already existing plants the number of which is limited, unfortunately has nothing to say about that outstanding feature of the great booms of history, the sudden growth of new industries.

The other theory is the more "modern" one, and is presented in terms of disappointed expectations. Here unexpected profits are made the impelling force of the boom mechanism. What brings the cumulative process to an end is not any actual diminution of profits, but the mere psychological fact that because of rapidly growing optimism profits no longer exceed the expected level. Since, however, only unexpected profits can give rise to increases in the rate of investment, the process of expansion will be checked. This theory is undoubtedly superior to the one previously described in that it is also applicable to the depression and thus explains both turning points. The emphasis laid on disappointed expectations as one of the factors precipitating the downturn is certainly most welcome, but unfortunately the analysis is carried no further. We learn nothing about the forces which allow entrepreneurial enthusiasm to become exuberant, nor are we told why all producers should react in the same way.

Dr. Shackle believes that his two theories are not mutually exclusive

(104). Yet it is difficult to see how all those who have already acquired temporary immunity against investment-fever could be affected by disappointed expectations. And why should those who have entered the field later be the more sanguine optimists ?

The last chapter (pp. 109–16) is devoted to the " Asymmetry of the Multiplier ". Here Dr. Shackle suggests that at the same income level the marginal propensity to consume for decrements of income may be different from that for increments, and therefore the " downward Multiplier " different from the " upward Multiplier ". This seems an extremely valuable suggestion which it would be worth while to follow up in greater detail.

L. M. Lachmann.

Consumers and the Market. By Margaret G. Reid. New York : F. S. Crofts & Co. 1938. xvi + 569 pp. $3.75.

In those parts of the world where the capitalist system is still permitted to survive, two problems in the Art of Political Economy are of outstanding importance—the variation of general activity and monopolistic practices. The former has of recent years received more attention from professional economists than the latter. Certainly there has been no lack of work on the theory of imperfect competition. But it has been concentrated on those aspects of the problem that lend themselves to treatment by rigidly analytical methods : on " ideal output ", interpreted quantitatively and with reference to a particular firm or industry ; on the costs of the individual firm ; and so on. Less attention has been given to the effect of such practices upon the qualitative make-up of the whole national output. This is understandable, for here we have to fall back largely upon observation ; and observation demands more time and more money than analysis. How far does the qualitative make-up of the existing national output of goods and services (including the " services " of the public relations officer, the racketeer, and the tout) diverge from the " ideal " qualitative make-up ? To form even a tentative answer to this question requires prolonged and close investigation of the actual working mechanism of distribution.

Studies of the distributive mechanism, such as there are, have generally been written from the standpoint of the manufacturer or trader. Professor Reid looks at it from the standpoint of the consumer. Does it provide him with that assortment of goods and services which, if prices were equal to costs, he would prefer to all others ? And if it does not, can we adjust its mode of operation so as to make it yield an assortment more nearly " ideal " ?

Professor Reid has nothing strikingly original to contribute to this subject. But she is a safe and generally reliable guide. She begins by explaining why the problem is more urgent now than in the days of the small business and the much more nearly self-sufficient family. She then describes the working of the distributive system in detail, and enumerates the services that distributors render. But are all these "services" really wanted? and are they rendered at cost? Distributors furnish information; but some of the information is misleading or even false. They offer credit, but frequently only at extortionate rates. In this connection she discusses in greater or less detail advertising, instalment credit, branding, grading, the labelling of packages, resale price maintenance, and quantity discounts. The tests applied are searching, and the verdict by no means favourable. Finally she turns to possible remedies. Under this heading are considered voluntary organisations of consumers, voluntary organisations of producers and distributors, and governmental agencies.

In passing judgment upon these Professor Reid is extremely cautious. She does not believe in *laissez-faire*. She is profoundly distrustful of "planning". She has no difficulty in showing that most planning is planning by or for producers against consumers. Her general standpoint is that of Professor Hutt, whom she quotes with approval. She wants the State to make competition function. But she knows too much of American legislative methods to feel much confidence that it will succeed in this. She believes, too, in educational remedies. But she points out that voluntary education of adult consumers through bodies like Consumer Research Inc. is confined in the main to the well-to-do, and likely to remain so; while State-sponsored education in schools of future consumers is in danger of being exploited by expert public relations counsel in the pay of producing interests.

For English readers the value of her book is diminished by the double circumstance that her investigations have been almost wholly confined to American conditions, while her method of exposition assumes a working knowledge of these conditions which most English people do not possess. Thus she nowhere explains what a Better Business Bureau is, or what it does. She takes it for granted that we know. Yet her book is extremely long. Her style also lacks distinction. It is a pity that with much good material and an unusually level-headed judgment, she lacks the gift of making what is important in her argument or narrative stand out with greater prominence than what is merely subsidiary.

P. A. WILSON.

The Economics of Corporate Saving. By J. ELLWOOD AMOS. University of Illinois Press. 1938. 136 pp. $1.50 paper bound, $2.00 clothbound.

The legal distinction between the small company and its shareholders is, perhaps, of minor importance for economic analysis since the behaviour of the company is likely to be dictated by those who have provided its resources. But with large corporations it is otherwise; their separate existence is something more than a legal fiction. Directors and auditors have come to serve what they believe to be the interests of the corporation *as such.* The importance of this is now being realised by economists, and, to the small but growing body of literature dealing with the subject, Mr. Amos has contributed a study of corporate saving by which he means that part of " net profit " which is not distributed in taxation or dividends. The main source of data consists of the statistics published by the Bureau of Inland Revenue, U.S. Treasury Department. While accounting documents remain as crude and as unreliable as they are at present, there is a definite advantage in using these income tax figures for the tax regulations do impose some slight degree of uniformity.

In view of the importance to his study of the definition of income it is a pity that Mr. Amos has not discussed in some detail the conventions underlying the calculation of net profit for tax purposes. The connection between the increased-net-worth concept of income and the income principles accepted by the fiscal authorities, as well as the relationship of both of these to dividends are relevant to a study of saving. Nevertheless, Mr. Amos has a heathy distrust of his primary material and is careful to emphasise that " the appearance of scientific precision in any estimate of corporate saving, even based on these data, is an illusion " (p. 23).

One of the points which is brought out by the study is the obscurity which results from deducting the losses of unsuccessful companies in calculating total income for the purpose of comparing income with dividends. Mr. Amos distinguishes the financial results and dividends of those companies shewing profits from the figures of those making losses. According to his tables, from 1923 to 1929 nearly half of net profits were ploughed back amounting to about 50 per cent. of the total of new corporate capital. The pundits of " sound financial practice " who recommend the stabilisation of dividends will be interested in the small part of the accumulations of this period which were paid out in dividends after 1929; promises were not fulfilled. This of course is to be expected; so called " reserves " are often used to expand the business in which event cash ceases to be available.

Perhaps the most important problem for economists is to decide what would happen if the amount saved were paid out in dividends. In the last few years considerable attention has been paid to the fact that cash as it flows into the corporation avoids submission to the test of the market rate of interest before being re-invested. There is, however, the further point that the shareholder might not merely choose between re-investment in alternative securities if the cash were paid out to him—he might choose to consume. Mr. Amos takes the view that if all profits were paid out there would be less saving; it seems almost certain that this is true for inertia would then operate against saving rather than for it. On the other hand, such saving as did take place might prove more lucrative than at present as investments would have to submit to the market test.

Mr. Amos has an interesting chapter on the federal tax on undistributed profits in which he discusses the arguments by which it was opposed and defended, and its effects on dividends up to the time at which he was writing (1937). Even at this date he held out little hope for the life of this child born of a union between financial expediency and social principle. One can understand the condemnation which poured forth from business men on the one hand and sur-tax payers on the other, but it is not very clear that the small investor in the large corporations had much to lose.

Though it contains little original material, this volume is a very useful summary and comparison of views relating to problems in connection with which the greatest need is more factual information. Mr. Amos has done an important service in marshalling the evidence in such a way as to draw attention to the unsolved difficulties.

RONALD S. EDWARDS.

Modern Money. By MYRA CURTIS and HUGH TOWNSHEND. George G. Harrap & Co. Ltd. 1937. 320 pp. 7s. 6d.

In these days no book on money can hope to please everybody. The authors of this one have tried at least to please themselves. They accept much of the doctrine of Mr. Hawtrey and of Mr. Keynes, but they have not slavishly followed either of these writers. Independence of thought, however, is dangerous in an introductory work. The risk can be justified only by a little masterpiece, and this book is not quite that. Teachers will probably prefer to tell their students to read Mr. Hawtrey and Mr. Keynes for themselves.

I think the book would have pleased many people more if the authors could have accepted the dogma that savings equal investment. Their rejection of this gets them into difficulties when they deal with hoarding and with money income. On the other hand, some people might have been more pleased if the writers had been less influenced by certain notions now prevalent. Of these, I will mention two.

The first is the notion that the demand for money is directly related to the rate of interest in the sense of the yield on consols. This seems to me a drastic over-simplification. When our authors made the curt statement, on page 11, that money is "currency notes, coin, and the bank balances on which we can draw by cheque", did they not feel that somehow, sometime, deposit accounts should be brought into the picture? When they declared on page 150 that "broadly speaking" the various rates of interest all rise and fall together, did they not hear a distant rumble of thunder on the left? On the whole, this book is refreshingly realistic. Would it not be more realistic and more enlightening to consider money as one of several types of assets and to show that the way in which a person wants to distribute his total assets among different types depends on various factors: his temperament and circumstances, the total value of his assets, the "yield" in the widest sense of each type, and his expectations of how yields and values will change?

The second notion relates to public works. Our authors show very well how the whole system depends on spending, but they get so carried away by their enthusiasm for spending that they give the impression that public works are always and everywhere an infallible cure for a slump. Indeed, they assert on page 107 that during recent years "deliberate Government expenditure on public works was tried, with acknowledged success, in Italy, Germany, Belgium, Sweden, and the United States." This reads more like a wish-fulfilment than a sober statement of fact.

Nevertheless the book has several merits. It is pleasantly and for the most part very clearly written. The numerous statistical illustrations are admirably chosen. A number of points are made very well indeed. It is not very suitable for an introductory text-book, but it is a careful and thoughtful exposition.

F. BENHAM.

The Economic Policy of France. By the Hon. GEORGE PEEL. Macmillan & Co., Ltd. 1937. vi + 242 pp. 8s. 6d.

This book claims to analyse the economic policy of France from 1914 onwards, but in fact it deals mainly with the public finances of France during this period. Here the author is on ground which he clearly knows very well, and his review is most informative and interesting. Perhaps the main conclusion which emerges is that, whether or not a budget deficit is a good weapon to use against a slump, a continued deficit can exert a very depressing influence on the whole economy of a country such as France. The remedy suggested in this work is a scaling-down of the interest-charge on the national debt. I should have thought that an increase in direct taxation was desirable, but the author seems convinced that this is not possible.

The book as a whole is disappointing not for what it contains but for what it omits. Little is said about immigration, or the changing location of industry, or Protection, over the period. The fascinating episode of the Blum experiment is discussed far too briefly. The author writes so very well that it is a pity he did not give more space to the last few years.

F. BENHAM.

Principles of Economics. By FREDERIC B. GARVER and ALVIN HARVEY HASSEN. Boston: Ginn and Company. 1937. 686 pp. 17s. 6d.

This is a revised edition of this well-known and excellent introductory treatise. It now includes discussions of the more important changes in economic practice during recent years and the chapters on value have been rewritten in order to give a more up-to-date account of the theory of imperfect competition. Its main drawbacks are its price, its length, and, for English students, the space given to descriptions of American institutions and legislation. Nevertheless the teacher in search of an elementary textbook should consider this work carefully before deciding whether or not to recommend one of the cheap seven-and-sixpenny products now on the market.

F. BENHAM.

Market Control in the Aluminum Industry. By DONALD H. WALLACE. No. 58 of Harvard Economic Studies. Published in England by the Oxford University Press. 1938. xxix + 573 pp. 21s. net.

In the belief that " we need more studies of the different mixtures of competitive and monopolistic forces in particular industries . . . where the conditions of pure competition are not even approximated " Professor Wallace has written a book which is an important contribution to our knowledge not only of the aluminium industry but also of the working of market forces in general. The book is divided into four parts dealing respectively with technology and historical development, with the reasons for the continued existence of single-firm monopoly in the production of primary aluminium in the United States, with the consequences of various forms of market control—single-firm monopoly in the Unites States and oligopoly (with and without cartel agreements) in Europe, and lastly with the relations between integrated monopoly of ingot aluminium and competitors at the fabricating stage. There are six appendices and a bibliography.

As soon as account has to be taken of a rapidly shifting demand curve and great uncertainties, the assumptions of oligopolistic competition in static conditions are found to be unrealistic. In an interesting chapter comparing the theoretical possibilities of different types of market control Professor Wallace argues that in these conditions oligopoly is likely to produce on the average a larger investment and output than single-firm monopoly, even when the oligopolists take the indirect effects of their actions into account. Moreover Professor Wallace stresses the importance of the continuous adaptations of aluminium to new uses (mostly in the form of new alloys). Here the uncertainties are so great that oligopolists can take into consideration only the direct results of the introduction of a new adaptation. Oligopoly is, therefore, likely to result in the introduction of more improvements than single-firm monopoly.

One of the most interesting conclusions which emerge from this study is the importance of institutional factors in the development of monopoly. Economies of scale are not, in Professor Wallace's view, such as to necessitate single-firm monopoly in ingot production. He is of the opinion that the failure of competitors to enter the industry is to be attributed to the tariff and patent protection facilitated by an almost complete lack of any information relating to costs or to the financial position of the American Aluminum Company. The extension of patent protection from 1906 to 1909—a period of increasing demand—enabled the Aluminum Company to expand sufficiently to make subsequent entry of competitors extremely difficult. It is interesting to know that in 1912 the capital and surplus of the company was $30,000,000 of which $28,000,000 had been contributed from profits.

For the most part criticism of the Aluminum Company has come from independent fabricators competing at this stage with the integrated monopoly and dependent on the latter for supplies of primary ingot. Professor Wallace analyses in detail the problems of the price differential in sheet production, in the utensil industry and in the sand-castings industry; and the difficulties of proving the existence of "unfair" discrimination within the meaning of the Federal Trade Commission Act. He is doubtful whether, on balance, the result of attempts to control monopolistic practices in this field has been beneficial to any of the parties concerned. As he shows, neither the Federal Trade Commission nor the Department of Justice understood sufficiently the economic issues involved—which were in any case extremely complex. The elaboration of a code of rules relating to prices would be no easy matter and its administration would be even more difficult. Professor Wallace, while not offering any plan for reform, appears to favour the production of primary ingot by a Government Corporation as a means of maintaining competition at the fabricating stage and of inducing the "ideal" investment and output policy in the production of ingot. Some readers, however, will draw the conclusion from this study that the only way to control monopolies whose existence is not dependent on economies of scale, is to attack directly those institutional factors such as patent legislation, tariffs and the corporation laws which are responsible for the emergence of the monopoly, rather than to elaborate a complicated code of "fair" business practices whose successful administration is more than doubtful. Those who think that the problem of ensuring "ideal" output can be solved by any set of simple instructions to monopolistic organisations, will find in Professor Wallace's book little to strengthen their faith in the practicability of such policies.

R. F. Fowler.

Structural Changes and Business Cycles in South Africa, 1806–1936. By C. G. W. Schumann. London: P. S. King & Son, Ltd. 1938. xix + 397 pp. 16s.

The introductory chapter to this book is a discussion of method, calculated to justify the statistical work which follows. Dismissing an immediate uncomfortable feeling that he may be expected to contemplate disequilibrium with a mind closed to the idea of equilibrium, the reader may next be perplexed to find that, although deductive economics hindered constructive work on the trade cycle (p. 2), it yet made clear the essential problem (p. 13). And he will never be quite certain whether an insistence upon making the deductive method complementary to the inductive is meant to be a quarrel with the fundamental axiom that a man has preferences.

Part I, presenting statistics relating to the period 1806–1909, finds a coincidence of expansion with structural change, but no strong correlation between rising prices and expansion. The section on cycles tests for correlation between periodicity and "stage of economic development, rapidity of economic growth and structural change, and secular price trend": the result of the test is negative. The author's discussion falls below the logical standard set by himself; it is frequently question-begging. A boom is described as "*over*-intense", without any explanation of how it is a deviation from an ascertained norm of intensity; "*over*-expansion" and "*over*-contraction" are used in the same way; and "*over*-prosperity" is offered as an *explanation* of a subsequent recession. And here, and throughout the book, there is a propensity to assume that inverted commas avoid the necessity of definition.

Part II, covering the period 1910–36, is divided into a long chapter headed "Economic Growth and Structural Change", which discusses a variety of statistical series; a chapter presenting 14 time-series to measure the cycles; and three chapters on the cycle and banking and currency, foreign trade, and mining respectively. From much that invites criticism, one may select the absence, in the treatment of the 1932 depreciation, of any discussion of the effects of a contrary policy. Such a discussion should have thrown light on the question of how much of the post-depreciation gains to South Africa as a whole —after allowing South African robbed Peters to cancel South African paid Pauls—depended on *South African* depreciation. Instead, we find the assertion that the contrary policy was impossible, because, had the Government not depreciated the currency, it would have fallen, and its successor would have carried out the depreciation instead—a surprising assertion from one who both deplores unverified speculation, and allows (p. 385) the existence of a South African people capable of making its own decisions. Avoiding the analysis, the author approves the policy, and attributes to it gains which closer analysis might have attributed to conditions already present.

The chapter on foreign trade is a confusing and rather abortive effort to isolate items whose fluctuations show a correlation with the cycle and the balance of trade. Out of the chapter on mining can be sifted the idea of the gold mining industry as a stabilising factor—but an unreliable one, because costs and taxes do not always behave appropriately.

Part III resumes the discussion of method, with special reference to forecasting. Amongst other methods, diagnosis and prognosis, doctor-fashion, is recommended; and, for this, economic theory is regarded as generally essential. But although space is devoted to a sort of short anthology of modern trade cycle theory (pp. 364–370), there is no attempt to use the material collected in the book to test the theory with the rigour demanded by the introductory chapter. Towards a study, regarded as essential, of " the whole ' constellation ' of the economic system during each cyclic phase ", the author contributes " A Business Barometer " of 18 time-series. This is followed by a forecast that the boom in South Africa is nearing its end.

Here emerges also the author's belief in directive State policy to achieve " stabilisation " (" the elimination—total or partial—of all types of economic fluctuation, seasonal, cyclical, long-period and irregular "); and his belief that " objectives of a purely social, psychological or racial nature may justify economic sacrifices, may override the possible objective of the maximisation of total utility ". And one finds much besides to confirm one's earlier suspicions that the pains to put deduction in its place were calculated to let in dogma.

G. F. Thirlby.

The South : Its Economic-Geographic Development. By A. E. Parkins. New York : John Wiley & Sons, Inc. London : Chapman & Hall, Ltd. 1938. 528 pp. 25s.

This is a geographical account of the economic development of the Southern United States. The author writes that he " has made no conscious effort to keep the material within the recognised boundaries of any one or two academic subject matter fields ". The idea of development, implied in the title, does actually permeate the work, which is essentially an essay in changing geographical values. The South of which the author writes is that of the Census, and includes the " Upper South " (i.e., Delaware, Maryland, and the Virginias) as well as the cotton states.

An introductory chapter outlines the evolution of the South which it is the purpose of the book to describe, and is followed by Part I (a sixth of the volume) which the author devotes to a descriptive treatment of the natural environment itself, and of its modification under the influence of European Settlement. As this section contains

Recent Important Foreign Books on Economics

The Librarian of the British Library of Political and Economic Science has made arrangements, as a supplementary check to the purchases of the Library, to receive regularly every quarter from competent foreign scholars lists of the most important books in their respective fields of study published in their own countries (or languages as the case may be) during the preceding three months. It appeared to the Editorial Board of ECONOMICA that these lists might prove useful to other institutions, and the lists of books on economics will therefore be published regularly in future issues of ECONOMICA. It must be understood, however, that the Editorial Board of ECONOMICA accepts no responsibility for the selection of the books included in the list.

AMERICAN BOOKS

(Selected by Professor H. D. Gideonse).

HACKER, LOUIS MORTON: *American Problems of To-day: A History of the United States since the World War.* New York. xiii, 354 pp.

HOYT, ELIZABETH ELLIS: *Consumption in our Society.* New York. ix, 420 pp.

KING, WILLFORD ISBELL: *The Causes of Economic Fluctuations: Possibilities of Anticipation and Control.* New York. xv, 353 pp.

MOULTON, HAROLD GLENN: *Financial Organisation and the Economic System.* New York. xviii, 515 pp.

FRENCH BOOKS

(Selected by Dr. Robert Marjolin).

DELPECH, HENRY: *Recherches sur le Niveau de Vie et les Habitudes de Consommation* (Toulouse, 1936–1938). Paris. 330 pp.

LAUFENBURGER, HENRY: *L'Intervention de l'Etat en Matière Economique.* Paris. 371 pp.

NOGARO, BERTRAND: *La Méthode de l'Economie Politique.* Paris. vi, 275 pp.

PERROUX, FRANÇOIS: *Leçons d'Economie Politique.* 1ère Année. Paris. 993 + 124 pp.

GERMAN BOOKS.

MEYER, F. W.: *Der Ausgleich der Zahlungsbilanz.* Jena (Gustav Fischer), 1938 (Probleme der theoretischen Nationalökonomie, ed. W. Eucken.)

JACOBSEN, PER: *Vergleich des Wirtschaftsaufstieges in Grossbritannien, den Vereinigten Staaten und Schweden.* Jena (Gustav Fischer). 1938.

SCHMIDT, W.: *Kapital und Kapitalzins in der Planwirtschaft.* Düsseldorf (Nolte). 1938. vii, 76 pp.

ITALIAN BOOKS

(Selected by Professor Luigi Einaudi).

DEMARIA, GIOVANNI: *Elementi di Economia Politica Corporativa.* Messina. 342 pp.

RICCI, UMBERTO: *Tre Economisti Italiani: Pantaleoni, Pareto, Lorià.* Bari. 238 pp.

SERPIERI, ARRIGO: *Principii di Economia Politica Corporativa.* Firenze. viii, 240 pp.

Books Received

Arnold, P.: *The Bankers of London.* The Hogarth Press. 1938. 108 pp. 4s. 6d.

Astor, Viscount, and Seebohm Rowntree, B.: *British Agriculture.* Longmans, Green & Co., Ltd. 1938. xx, 469 pp. 15s.

Behling, B. N.: *Competition and Monopoly in Public Utility Industries.* The University of Illinois Press, Urbana. 1938. 187 pp. Paper Bound $2. Cloth Bound $2.50.

Blyth, Noreen: *Which Way To-morrow?* Chapman & Hall, Ltd. 1938. xii, 350 pp. 5s.

Brandt, K.: *The German Fat Plan and its Economic Setting.* Food Research Institute, Stanford University, California. 1938. xii, 344 pp. $3.00.

Chessa, F.: *La Moneta.* G. Giappichelli, Turin. 1938. xv, 509 pp. L.45.

Clark, C., and Crawford, J. G.: *The National Income of Australia.* Angus & Robertson, Ltd. 1938. viii, 111 pp. 3s. 6d.

Conférence Permaente des Hautes Études Internationales: (*Etudes danubiennes*) *Chronique des Evénements Politiques et Economiques dans le Bassin Danubien 1918–1936. Yougoslavia.* 1938. 53 pp. *Chronique des Evénements Politiques dans le Bassin Danubien 1918–1936. Tchécoslovaquie.* 1938. 100 pp. Institut International de Co-operation Intellectuelle, Société des Nations, Paris.

Connor, L. R.: *Statistics in Theory and Practice.* Sir Isaac Pitman & Sons, Ltd. 1938. xiv, 383 pp. 12s. 6d.

Crouchley, A. E.: *The Economic Development of Modern Egypt.* Longmans, Green & Co., Ltd. 1938. vii, 286 pp. 7s. 6d.

Crum, W. L., Patton, A. C., and Tebbut, A. R.: *Introduction to Economic Statistics.* McGraw-Hill Publishing Company, Ltd. 1938. xi, 423 pp. 24s.

Curtis, H. A.: *A Guide to the Hire Purchase Act, 1938.* Methuen & Co., Ltd. 1938. xi, 49 pp. 2s. 6d.

Dennison, H. S., Filene, L., Flanders, R. E., and Leeds, M. E.: *Toward Full Employment.* McGraw-Hill Publishing Co. 1938. xiii, 297 pp. 12s. 6d.

Drummond and Marshall: *Consolidated Loans Funds of Local Authorities.* William Hodge & Co., Ltd. 1938. 170 pp. 7s. 6d.

Gandhi, M. P.: *The Indian Sugar Industry.* Gandhi & Co. 1938. lxxxv, 168, 28 pp.

Guitton, H.: *Economie rationnelle, économie positive, économie synthétique.* Étude sur l'Histoire des Théories Économiques, Paris. 1938. x, 146 pp. Fr. 40.

Hailey, Lord: *An African Survey.* Oxford University Press. 1938. xxviii, 1837 pp. 21s.

Hawtrey, R. G.: *A Century of Bank Rate.* Longmans, Green & Co., Ltd. 1938. x, 328 pp. 10s. 6d.

"Herbert Somerton Foxwell 1849–1936": From the *Proceedings of the British Academy.* Vol. XXIII. Oxford University Press, 1938. 19 pp. 1s. 6d.

Hicks, Ursula K.: *The Finance of British Government, 1920–1936.* Oxford University Press. 1938. xi, 391 pp. 15s.

Higginson, J. H.: *New Testament Economics.* 1938. 76 pp. 2s.

Hütter, J. P.: *L'Incidence économique de la frappe de monnaie d'argent aux Etats-Unis de 1878 à 1893.* Les Editions des presses Modernes, Paris. 1938. 82 pp. Fr. 18.

Hütter, J. P.: *La question de la monnaie d'argent aux Etat-Unis des origines à 1900.* 1938. 493 pp. Fr. 75.

International Labour Office: *The Worker's Standard of Living.* P. S. King & Co., Ltd. 1938. 101 pp. 2s. $0.50.

International Studies Conference: *Chronology of Political and Economic Events in the Danube Basin, 1918–1936.* International Institute of Intellectual Co-operation, League of Nations, Paris. 1938. 120 pp.

Kirsh, B. S., and Shapiro, H. R.: *Trade Associations in Law and Business.* Central Book Company, New York. 1938. 399 pp.

Korsch, K.: *Marx.* Chapman & Hall, Ltd. 1938. 247 pp. 6s.

Layton, W. T., and Crowther, G.: *An Introduction to the Study of Prices.* Macmillan & Co., Ltd. 1938. xiv, 288 pp. 8s. 6d.

Letellier, G.: *Le chômage en France.* Librairie du Recueil Sirey, Paris. 1938. 330 pp. Fr. 75.

Lindquist, E. F.: *A Study Manual for a First Course in Statistics.* 1938. 120 pp. 5s.

Lindquist, E. F.: *A First Course in Statistics.* Houghton Mifflin Company, Boston, U.S.A. 1938. xi, 226 pp. 8s. 6d.

Linfield, H. S.: *State Population Census by Faiths.* Hasid's Bibliographic and Library Service. 1938. 68 pp.

Locklin, D. P.: *Economics of Transportation.* Revised Edition. Business Publications, Inc., Chicago. 1938. 863 pp.

Medlicott, W. N.: *The Congress of Berlin and After.* Methuen & Co., Ltd. 1938. xii, 442 pp. 15s.

Mann, F. A.: *The Legal Aspect of Money.* Oxford University Press. 1938. xxv, 334 pp. 21s.

Matolcsy, M., and Stephen, V.: *The National Income of Hungary,* 1924/25—1936/37.

Mills, F. C.: *Statistical Methods Applied to Economics and Business.* Sir Isaac Pitman & Sons, Ltd. 1938. xvi, 604 pp. 15s.

Ministry of Labour, Industry and Commerce: *Report on the Economic Survey of Five Villages in Puttalam District.* Ceylon Government Press, Colombo. 1938. 48 pp. 25 cents.

Mottram, V. H.: *Food and the Family.* James Nisbet & Co., Ltd. 1938. xi, 232 pp. 5s.

Mühlen, N.: *Hitler's Magician: Schacht.* George Routledge & Sons, Ltd. 1938. 228 pp. 10s. 6d.

Petersen, E.: *Macro-Dynamic Aspects of the Equation of Exchange.* Jacob Dybwad, Oslo. 1938. 116 pp.

Piatier, A.: *L'Evasion Fiscale et l'Assistance Administrative Entre Etats.* Librairie du Recueil Sirey, Paris. 1938. 361 pp. Fr. 50.

Pirou, G.: *L'Utilité Marginale: De C. Menger à J. -B. Clark.* Les Éditions Domat-Montchrestien, Paris. 1938. 323 pp.

Possony, S.: *To-morrow's War.* William Hodge & Co., Ltd. 1938. 255 pp. 8s. 6d.

Report on Agricultural Research in Great Britain: *Political and Economic Planning.* 1938. 146 pp. 8s. 6d.

Robbins, C. (Ed.): *Diary of John Milward, Esq.* Cambridge University Press. ci, 349 pp. 21s.

Rousseaux, P.: *Les mouvements de fond de l'économie anglaise 1800–1913.* Institut de Recherches Économiques, Louvain. 1938. 299 pp.

Secrist, H.: *National Bank Failures and Non-Failures.* The Principia Press, Indiana, U.S.A. 1938. xix, 309 pp.

Senior, N.: *An Outline of the Science of Political Economy.* Library of Economics. George Allen & Unwin, Ltd. 1938. xii, 249 pp. 7s. 6d.

Smart, R. C.: *Coal and the Nation.* New Fabian Research Bureau. No. 19. 1938. 38 pp. 6d.

Spengler, J. J.: *France Faces Depopulation.* Duke University Press, North Carolina, U.S.A. 1938. xi, 313 pp. $3.00.

Studies of the Tasmanian Economy: *The Tasmanian Economy in 1937–38.* H. H. Pimblett, Government Printer, Hobart. 1938. vii, 25 + charts.

Tasca, H. J.: *The Reciprocal Trade Policy of the United States.* 1938. xiv, 371 pp.

Thomas, D. S.: *Research Memorandum on Migration Differentials.* Social Science Research Council, New York. 1938. viii, 423 pp.

Titmus, R. M.: *Poverty and Population.* Macmillan & Co., Ltd. 1938. xxviii, 320 pp. 10s. 6d.

Tiwari, R. D.: *Leather Industry.* Reprinted from *The Journal of the University of Bombay*, Vol. VI, Part IV, January, 1938. 52 pp.

Troup, R. S.: *Forestry and State Control.* Oxford University Press. 1938. vi, 87 pp. 3s. 6d.

Unwin, G.: *The Gilds and Companies of London.* George Allen & Unwin, Ltd. 1938. vii, 401 pp. 10s. 6d.

Vance, R. B.: *Research Memorandum on Redistribution Within the United States.* Social Science Research Council, New York. 1938. 134 pp.

Ward, B.: *The International Share-Out.* Discussion Books No. 17. Thomas Nelson & Sons, Ltd. 1938. vi, 174 pp. 2s.

Yahuda, J.: *Bio-Economics.* Sir Isaac Pitman & Sons, Ltd. 1938. xvii, 204 pp. 7s. 6d.

The Analysis of Costs of Retail Distribution[1]

Illustrated from Data relating to a Sample of Departmental Stores.

By Arnold Plant and R. F. Fowler

This paper is devoted to a study of the operating experience of a sample of retail shops all of which classify themselves as department stores. Almost the whole of the commodities which they sell are purchased by them from manufacturers or other traders in a finished condition. All of these stores, to a greater or less extent, undertake the delivery of the commodities they sell to the homes of their customers. Each member included, while not necessarily knowing the identity of the other members, is sufficiently confident that his business is usefully comparable with theirs to induce him to make that comparison possible.

This confidence in the relative homogeneity of their business activities is important because so many attempts to compare costs of distribution are invalidated by the dissimilarity of the work done. There is so much variation in the amount of assistance which manufacturers render at the distribution stage, in the services which the distributors themselves offer to their customers, and in the degree to which different classes of consumers are prepared to undertake part of the distribution function for themselves, that comparisons must be made with great caution. The question of the justification for confidence in the present comparisons will need to be investigated.

The content of the present paper is based upon data supplied, over the seven years of trading operations beginning on February 1st, 1931, by department stores in Great Britain which are members of the Retail Distributors' Association.

---

[1] This article embodies the content of a paper read on 14th December, 1938, before the Manchester Statistical Society and published in the *Transactions* of that Society.

The form of the questionnaire which has been employed each year was determined by a committee comprising department store accountants and other experts, in addition to the two authors. The blank schedules have been distributed under code numbers to the collaborating stores by the secretariat of the Retail Distributors' Association, and re-coded by the Statistical Department of the Bank of England which has acted as intermediary between the stores and the present authors, who throughout the enquiry have been responsible for the work of analysis and compilation of annual reports. The coding system has enabled contact to be maintained between the compilers and their anonymous collaborators in the enquiry.

In determining the content of the questionnaire it was necessary first of all to decide one or two major questions of classification and definition.

In the first place it has not been possible to isolate a figure corresponding exclusively to entrepreneurial receipts or "profit." That would have involved either a separate valuation of each of the assets of each store, in order to make a charge for interest at the appropriate market rate; or alternatively it would have involved a valuation of the net worth of each business taken as a whole having regard to the anticipated flow of future net income. Either procedure is clearly impracticable if the valuation decision is to be left to the collaborating firm, for there could be no expectation of consistency of criteria to be adopted by over 100 valuers.

Since interest cannot be separated it has to be recognised that rent also is incapable of accurate assessment. A store may own its premises, or occupy them on a long lease at a conventional rental, or on a short lease at a rental approximating to the current market rate. In the case of Rentals, a satisfactory index is fortunately available upon a comparable basis in the Gross Schedule A tax assessment. On expert advice the Gross assessment has been preferred to the Net assessment on grounds of comparability, although maintenance and repairs to buildings is also separately shown as a cost.

Inability to isolate interest (except for the arbitrary index of rent) has meant that after separating all other items of cost, the net margin remaining when the cost of goods sold and all identifiable costs have been subtracted from sales, includes the interest cost as well as any " profit." Clearly, the interest charge will not be a constant proportion for all stores ; for example, the larger stores have opportunities for substituting mechanical aids for labour which are not open to the small stores, and they will, therefore, show a lower labour cost against which must be reckoned an increased charge for interest which is included in their net margin. We must beware of concluding hastily that large net margins necessarily mean large net " profits."

The valuation problem cannot be completely avoided. It is necessarily involved in the computation of the cost of goods sold, which figure is derived from the value of the opening stock, the actual cost of stock newly purchased during the period, and the value of closing stock at the end of the period. It cannot be expected that all the collaborating firms adopt the same method. But it may with some confidence be assumed that the same firm will be consistent, over a period, in whatever method it adopts. In our view, therefore, the figure representing Gross Margin, being the difference between the net revenue from sales and the cost of goods sold, which is clearly of vital importance, can be regarded as a reliable indication of the value added at the retail stage to the goods which have been distributed.

The Representativeness of the Sample

Another important limitation attaches to the significance of the results derived from this sample enquiry. It provides us with the value added at the retail stage but only in respect of those stores which have voluntarily decided to collaborate. The sample is in no sense a random sample. Whatever views we may privately hold about the degree to which it is representative of department stores as a whole we have no justification for extrapolating our results to cover department stores as a whole. It is known that the sample includes the great majority of the better known stores in Great Britain. But we know also that they differ from the rest in their willingness to collaborate in this enquiry and it would be injudicious to assume that their business behaviour is strictly comparable in all other respects. Still less justifiable would be any attempt to extrapolate from these results to the retail trade of the country as a whole.

Having said so much, however, we should be equally careful not to under-rate the significance of the sample. In each of seven years over 100 stores have collaborated; their total sales have averaged over £50,000,000 each year, they employ a staff of about 45,000 people and have an annual wage bill of about £6,500,000, and they carry at any one time about £8,000,000 worth of stock.

In what precisely does the significance of their combined experience consist?

It should perhaps be suggested first of all that the figures relating to any one period possess a greater value to the collaborating firms than they do to the detached student of social phenomena. The opportunity for the first time to compare its own operating experience with the general experience of stores which it believes to be comparable, provides a store with new information of definitely substantial importance. It is not that any special virtue attaches to possessing or attaining to a cost structure corresponding to that of generalised experience, but simply that, until the opportunity for such comparisons presents itself, the firm has no ordinates in relation to which it can plot the figures of its own experience. The pooled figures enable a map to be constructed upon which the firm can mark its own position. The map cannot show roads along which movement is possible. Much less can it indicate the desirable direction of movement. It serves simply to reveal differences of position. The firm is enabled to raise questions, the answers to which are likely to be significant for policy, in terms which hitherto could not have been formulated. Its managers may be surprised that its costs are different; for the first time they are cognizant of the fact and can explore the reasons. They may be equally surprised that they are not different. In either case an enquiry may be launched which is likely to precipitate suggestions concerning future policy. The firm may discover that its divergences from the average provide evidence of a market advantage which may be still further exploited, or on the other hand, that they indicate weaknesses which are better eliminated.

COMPARABILITY WITHIN THE SAMPLE

For the generalised figures to be useful in this way it is clear that the collaborating firms must be comparable. If the purpose of the comparison is to reveal differences in costs of performing the same services in differing market conditions, as for example, the differences involved in running a high-grade shop in different regions, then we must be reasonably certain that the class of trade is really comparable in the various regions, and the comparison is still more likely to be useful if it can be made between stores of approximately the same size. Even so the main lesson to be drawn may be that stores which appeared to be comparable are in fact far more heterogeneous in character than had previously been realised. A firm may wish to be able to compare its costs with those of others because it believes that the services they all perform are broadly similar, and that any differences which the comparison reveals either will have been those which it anticipated on account of peculiar market conditions, or, if not anticipated, will be capable of explanation and remedy. If, in fact, still other differences are revealed, the firm may reasonably conclude that it is not in fact really comparable, and may be led to realise the nature of differences of which it was previously unaware. It may decide to develop its differences rather than to imitate the others.

If the size of sample is large, a great number of different groups may be assembled for analysis upon different hypotheses concerning the likelihood that the firms in each group should be usefully comparable. Different criteria can be chosen, and groups of stores assembled which are homogeneous in respect of any one criterion. Failure to discover any significant relationship between the experience of firms in particular groups may lead to a realisation that the criterion was not itself significant. To take an obvious example, the view has been widely held that high rates of stock-turn are associated with prosperity. If stores are grouped solely in accordance with their rate of stock-turn this view will probably appear to be substantiated. Further analysis will probably reveal that not all stores with high rates of stock-turn are prosperous, nor do all with low rates of stock-turn report losses. It may then be discovered that the stock-turn is associated closely with the size of store; that large stores, in general, secure a much higher rate than, on account of the "indivisibility" of stock, a small store will generally obtain. Still another grouping will associate different rates of stock-turn with differences in the types of goods sold; fish, to be successfully sold, must be "turned over" much more rapidly than is the case with jewellery.

In the case of the samples of over 100 department stores which have pooled their figures in each of the seven years since 1931, the homogeneity of the whole group was tested firstly by separating those which concentrated upon the trade in various groups of merchandise, from others which were more comprehensive in their range. There are six main groups of merchandise, viz. Piece Goods, Women's Wear, Men's and Boys' Wear, Boots and Shoes, Furnishings, and Hardware, which are usually distinguished; and of 92 stores (for which information could be obtained) two-thirds deal in at least five of them; while one-half cover the entire range. On the other hand, eight of the 92 concentrate on one of these main types of merchandise, and six others on two groups only. Of these latter 14 stores ten include women's wear. Even that degree of concentration does not imply narrow specialisation; each group comprehends many different types of merchandise, sold in many separate departments and presenting a variety of cost and merchandising problems. Whether or not in aggregate their merchandising problem is sufficiently different in nature, from that of the stores undertaking a more comprehensive trade, to render comparisons valueless clearly has to be investigated.

The sales and costs of each of these groups were separately analysed with reassuring results. The differences revealed in Gross Margins and in Total Costs were in each case no greater than could reasonably be attributed to *scale* of operation, or to the quality of trade undertaken as distinct from the nature of the merchandise. One exception should, however, be made. A dozen of the larger stores in the sample conduct a business in foodstuffs, and that type of trade is clearly peculiar, for example, in the amount of delivery expense which it entails. Where the trade in food is considerable the high rate of stock-turn in that class of merchandise, which is associated with low gross margin and low expenses when reckoned as a percentage of sales, affects the main cost figures. The possibility of food departments has to be kept constantly in mind when making comparisons.

Comparisons might have been vitiated by differences in the *range* of merchandise sold in different stores; but even if all the stores handled the same range, differences in *quality* of trade might equally be expected to exert an important influence. We can readily conceive of more expense or different kinds of expense being involved in selling a high-class exclusive speciality product as compared with a mass-produced and nationally branded article which falls in the same category of merchandise. A shopkeeper might well regard it as sound business policy to send women's wear of high value out on approval, and maintain an expensive credit and debt collection department in connection therewith, whilst none of this expense might be justified in the lower class of trade. If the sample is sufficiently large to permit of the separation of stores on the basis of the quality of the trade done, comparisons will be much more enlightening. In the present instance this separation has been possible from the outset.

Comparability may be impaired still further by differences in method of doing business, which may be the necessary consequence of differences in the market or, on the other hand, the deliberate choice of the shopkeeper. An important instance is the conduct of a business upon a cash or credit basis. Credit may be almost unavoidable in certain types of business ; in other cases it may be adopted in the belief that an increase in sales will result which will more than compensate for the additional costs involved.

The same consideration of homogeneity suggests the necessity for still further separation according to region. It is known that demand conditions and cost conditions are different in important respects in the Centre and West End of London from those obtaining in the Provinces and in the London Suburbs. It would be unfortunate if so much emphasis were laid upon regional differences that unwarranted doubts were raised concerning the comparability of department stores throughout the country as a whole. But that does not mean that we should neglect to take every opportunity which the size of sample offers to make further comparisons limited to stores in particular regions. Shopkeepers themselves will rightly be far more interested in comparisons with their peers in their own locality than with those in the whole country.

We have left to the end of this discussion of homogeneity a factor which appears to us to be of importance equal to the class of trade in its influence upon operating results, namely, the scale of operation of the business. The significance of "indivisibility" is evident throughout. There is a minimum range and value of stock, a minimum staff, and a minimum equipment which is necessary if a department store is to be kept in being. The greater volume of sales secured by those department stores which enjoy a wider market does not involve them in proportionately larger costs so far as these expenses are concerned. Stores with greater sales can afford a specialisation of equipment and staff which cannot be supported by a smaller volume of business; the stores with still larger sales enjoy a further advantage in that their greater sales do not involve them in a proportionate extension of specialisation and "departmentalisation." In the department store world, as elsewhere, the advantages of scale are not indefinite; there is a point beyond which the costs of central administration are more than proportionately greater, the larger the store. It is clear that store managers will be most concerned with comparisons of their experience with that of similar stores operating on a similar scale.

With a sample as small as a little over 100 department stores the extent to which these sub-divisions can be carried, separating groups of greater and greater homogeneity by taking account of all of these considerations, is clearly very limited. A very small sample is unsatisfactory for two conclusive reasons. No modal behaviour can be expected to emerge, nor will it be possible to conceal the identity of particular stores. But it is clear that the sub-divisions must be taken as far as these two considerations permit.

DEFINITIONS AND COST CLASSIFICATION

The definition of annual value of sales, of the cost of goods sold, and consequently of the gross margin may be set out as follows :—

ANALYSIS OF TRADING

I. GROSS SALES.

Less credits and discounts (these covering any discounts to staff and trade customers) and discounts for cash or for monthly payments.

NET SALES

II. COST OF GOODS SOLD. (See note 1)

Separate figures for (1) . . . (8) need not be given provided the total figure Gross Cost of Stock includes them.

---

[1] NOTE.—All Salaries and Wages include National Insurance Contributions where paid, and a proportionate charge for Housekeeping, if provided.

(1) Net Stock, at Cost or Valuation, at beginning of period as shown by the stocktaking.
(2) *Plus* Goods purchased during the period at invoice price after deducting all trade discounts, but *not* counting house discounts.
(3) *Plus* Carriage, freight, parcel postage, inward insurance and similar charges incurred in connection with purchases, if not elsewhere included.
(4) *Plus* Customs duty and landing charges on goods purchased, if not elsewhere included.
(5) *Plus* Buyers' travelling expenses.
(6) *Plus* Foreign offices' commissions.
(7) *Plus* Salaries and Wages of all production departments, including work-rooms and alteration rooms, together with the cost of maintenance, repairs, and depreciation on the productive plant and equipment in such departments.
(8) *Plus* Wages *only* in hairdressing, manicure, restaurant (kitchen staff only), removal and warehousing departments, together with wages and travelling expenses of piano tuners, but *not* including salaries of the managers, which shall be charged to Expenses.

GROSS COST OF STOCK

(9) *Less* Counting house discounts received.

NET COST OF STOCK

(10) *Less* Stock, at Cost or Valuation, at end of period as shown by the stocktaking.

NET COST OF GOODS SOLD

III. GROSS MARGIN (Net Sales less Net Cost of Goods Sold).

The operating expenses have in their turn been classified in five main divisions, viz., Administration, Occupancy, Publicity, Merchandising and Despatch. In each division, salaries and wages are segregated under the heading "Personal". The break-down of the five expense divisions is shown below:—

1. ADMINISTRATION

	Impersonal	*Personal*	*Total*
A.		Executive Salaries	Executive

	Impersonal	*Personal*	*Total*
	B. Accountancy	B. Accountancy Salaries and Wages	
	(1) Bad Debts		
	(2) Audit Fee		
	(3) Counting House & Office Equipment		Accountancy
	C. General	C. General	
	(1) Stationery	(1) Clerical salaries and wages	
	(2) Letter postage		
	(3) Telephones	(2) Telephones	
	(4) Commercial Insurance	(3) General Wages	
	(5) Legal and Professional Services		
	Travelling		
	(7) Subscriptions to Charities		
	(8) Miscellaneous		General
	D. Staff Expenses	D. Staff Expenses	
	(1) Welfare	(1) Welfare, Athletic and Social—Salaries and Wages	
	(2) Athletic and Social		
	(3) Uniforms	(2) Canteen	
		(3) Pensions	Staff Expenses
2.	OCCUPANCY		
	A. Buildings—Rent and Rates		
	(1) Rent		
	(2) Rates		Buildings—Rent and Rates
	B. General	B. General	
	(1) Heat, Light, Power and Water	(1) Heat, Light, Power and Water	
	(2) Maintenance and Repairs	(2) Maintenance and Repairs	
	(3) Depreciation	(4) Cleaning	
	(4) Cleaning		
	(5) Miscellaneous	(5) Miscellaneous	General
3.	PUBLICITY		
	A. General Advertising	A. General Advertising	
	(1) Press		
	(2) Direct Mail		
	(3) Other Advertising		General Advertising
	B. Display	B. Display	
			Display
4.	MERCHANDISING		
	A.	Buying	
		(1) Buyers and Buyers' Clerks	
		(2) Receiving and Marking	Buying
	B.	Selling	
		(1) Assistant Buyers and Shopwalkers	
		(2) Sales Assistants	
		(3) Mail Order	Selling

5. DESPATCH

Impersonal	*Personal*	*Total*
(1) Packing and Wrapping materials	(1) Despatch Room and Packers etc.—Wages	
(2) Parcel Postage, Rail, etc.	(2) Drivers, etc. Wages	
(3) Van supplies and Upkeep, etc.		
(4) Hire of Delivery Vehicles		
(5) Miscellaneous		
		Despatch

THE EXTENT OF THE SAMPLE

In each of the seven years beginning with the financial year 1st February 1931 to 31st January, 1932, information on each of these cost items has been obtained from over 100 department stores. The distribution of the stores is summarised in the following two tables.

	NUMBER OF STORES							Net Sales in 1937
	1931	1932	1933	1934	1935	1936	1937	£
All Stores	108	118	112	111	107	106	106	54,379,283
London	29	33	32	32	32	30	31	29,006,118
Provinces	79	84	80	79	75	76	75	25,373,165
High and High-Medium ..	40	42	43	42	43	44	45	21,946,980
Medium and Low	68	76	69	69	64	62	61	32,432,303

Net Sales per Store	NUMBER OF STORES						
	1931	1932	1933	1934	1935	1936	1937
Under £100,000	30	39	35	34	28	26	26
£100,000–£250,000	36	37	33	30	32	33	29
£250,000–£500,000	18	18	21	26	26	24	26
£500,000–£1,000,000 ..	14	14	13	10	9	11	12
Over £1,000,000	10	10	10	11	12	12	13
All Stores	108	118	112	111	107	106	106

The four tables which follow show the main operating figures for the sample of 106 Departmental Stores which collaborated in the enquiry for the financial year ending 31st January, 1938.

OPERATING EXPERIENCE OF 106 DEPARTMENTAL STORES IN THE YEAR ENDING 31ST JANUARY, 1938.

All the figures are percentages of net sales in each group.

TABLE I.

All Stores Analysed in Two Regions and Two Classes of Trade.

	All Stores			London			Provinces			High			Low		
	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total
Administration	1·66	3·30	4·96	1·69	3·46	5·16	1·63	3·12	4·74	1·81	3·60	5·40	1·56	3·10	4·66
Occupancy	5·44	0·62	6·07	5·49	0·62	6·11	5·39	0·63	6·02	5·81	0·60	6·41	5·19	0·64	5·84
Publicity	2·75	0·36	3·11	3·05	0·30	3·35	2·40	0·43	2·83	2·97	0·36	3·33	2·60	0·36	2·96
Merchandising ..	—	8·23	8·23	—	8·16	8·16	—	8·30	8·30	—	8·10	8·10	—	8·31	8·31
Despatch	1·36	1·03	2·39	1·48	1·18	2·67	1·22	0·86	2·08	1·52	0·99	2·51	1·25	1·06	2·31
Total	11·21	13·54	24·76	11·71	13·73	25·44	10·64	13·33	23·97	12·10	13·65	25·75	10·61	13·47	24·09
Gross Margin ..			31·29			32·17			30·28			32·88			30·21
Net Margin			6·53			6·72			6·31			7·13			6·13

TABLE II.

All Stores Analysed according to Annual Net Sales per Store.

	Under £100,000			£100,000–£250,000			£250,000–£500,000			£500,000–£1,000,000			Over £1,000,000		
	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total
Administration	2·23	3·31	5·54	1·98	3·08	5·07	1·84	3·25	5·08	1·54	3·43	4·97	1·57	3·31	4·88
Occupancy	7·23	0·45	7·68	6·55	0·33	6·88	5·53	0·63	6·15	5·99	0·65	6·64	5·01	0·67	5·67
Publicity	1·75	0·51	2·26	2·17	0·47	2·64	2·09	0·48	2·57	3·93	0·40	4·33	2·73	0·28	3·01
Merchandising ..	—	10·05	10·05	—	9·06	9·06	—	8·88	8·88	—	8·18	8·18	—	7·83	7·83
Despatch	1·13	0·97	2·12	0·97	0·60	1·57	1·10	0·91	2·01	1·16	0·71	1·86	1·57	1·23	2·80
Total	12·34	15·30	27·64	11·67	13·54	25·21	10·55	14·15	24·69	12·61	13·37	25·98	10·87	13·33	24·20
Gross Margin ..			30·32			31·15			30·15			31·42			31·66
Net Margin			2·68			5·94			5·45			5·44			7·46

TABLE III.

Further Analysis of Stores in London.

	Central and West End, London									Suburban Low		
	All Stores			High			Low					
	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total
Administration ..	1·68	3·49	5·17	1·68	3·67	5·36	1·67	3·31	4·98	1·72	3·24	4·96
Occupancy ..	5·48	0·63	6·12	5·54	0·60	6·14	5·43	0·66	6·09	5·51	0·56	6·07
Publicity	3·19	0·27	3·46	3·24	0·25	3·49	3·13	0·29	3·42	1·98	0·51	2·49
Merchandising ..	—	7·98	7·98	—	7·78	7·78	—	8·18	8·18	—	9·57	9·57
Despatch	1·56	1·22	2·78	1·80	1·15	2·95	1·31	1·30	2·61	0·93	0·89	1·82
Total	11·91	13·59	25·50	12·26	13·46	25·72	11·54	13·73	25·28	10·13	14·77	24·91
Gross Margin ..			32·60			33·64			31·54			28·92
Net Margin ..			7·10			7·92			6·27			4·01

Table IV.

Further Analysis of Stores in the Provinces.

	North Provinces						South Provinces					
	High			Low			High			Low		
	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total	Impersonal	Personal	Total
Administration ..	1·86	3·68	5·54	1·36	3·04	4·40	2·19	3·00	5·19	1·55	2·80	4·34
Occupancy ..	6·32	0·61	6·93	4·82	0·73	5·56	5·94	0·56	6·50	5·10	0·55	5·65
Publicity	2·87	0·53	3·40	2·86	0·38	3·24	1·83	0·48	2·31	1·76	0·38	2·14
Merchandising ..	—	8·35	8·35	—	8·06	8·06	—	9·04	9·04	—	8·29	8·29
Despatch	1·13	0·74	1·87	1·44	0·92	2·36	1·12	0·80	1·92	1·09	0·90	2·00
Total	12·17	13·92	26·08	10·48	13·14	23·62	11·07	13·89	24·96	9·50	12·91	22·42
Gross Margin ..			31·29			29·72			33·30			29·17
Net Margin ..			5·20			6·10			8·34			6·75

It is not proposed to discuss these tables in detail, but one or two of the outstanding differences between the two classes of trade and the various regions ought not to be passed over without comment.

The Gross Margins secured in the High Class trade are substantially higher than in the rest. Their Total Expenses are also larger, but so also are their Net Margins. It may be that the Net Margin percentage includes different amounts of interest in the two cases. The London stores show higher Gross Margins but they also show higher Total Expenses than the rest of the country. The London Suburban Stores do not secure higher Gross Margins to compensate for their higher costs. In the North Provinces costs range higher than in the South and once again the Gross Margins are not sufficiently high to compensate, although the disparity is not considerable in the low class of trade.

The differences in operating experience recorded by stores of different size are most striking. The larger stores do not show much higher Gross Margins: if they buy more cheaply they lower their prices. The larger stores show substantial savings in Total Expenses; and economies are secured mainly in the divisions of Merchandising (very largely as we shall see in the cost of Buying), in Occupancy, and to some extent in Administration. On the other hand it costs them a good deal to reach their larger public as witnessed by their higher costs for Despatch and Publicity.

In addition to the 4 preceding summary tables a broad indication may be given of the break-down of each of the 5 main divisions of Expense. The figures are approximate, averaging some recent years, and relate to the sample taken as a whole.

Administration:	Percentage of Net Sales	
	Impersonal	Personal
Executive	—	1·25
Accountancy	0·25	1·05
General	1·35	0·70
Staff	0·05	0·25
	1·65	3·25

Occupancy:		
Rent and Rates	3·35	—
General	2·10	0·60
	5·45	0·60

Publicity :

		Percentage of Net Sales	
		Impersonal	Personal
General Advertising		2·40	0·15
Press	1·35 ..		
Direct Mail	0·80 ..		
Other	0·25 ..		
Display		0·35	0·20
		2·75	0·35

Merchandising :

	Impersonal	Personal
Buying	—	1·90
Selling	—	6·35
		8·25

Despatch :

Impersonal	Personal
1·35	1·05

Measures of dispersion have been calculated for the more important averages. The inter-quartile range is shown in the following tables against the weighted average figures relating to the year 1937-38.

TABLE V.

Showing the Range of Deviations of Actual Returns from the Average Figures of Gross Margins, Net Margins, Impersonal and Personal Expenses and the Main Expense Divisions for 106 Stores taken together (All Stores).

	Weighted Average	Lower Quartile	Median	Upper Quartile
Gross Margin	31·29	28·94	30·90	33·02
Total Expenses	24·76	23·81	25·72	27·51
Net Margin	6·53	2·83	5·29	8·58
Inpersonal Expenses ..	11·21	10·19	12·10	12·94
Personal Expenses ..	13·54	12·79	14·10	14·85
Administration	4·96	4·34	5·00	5·73
Occupancy	6·07	5·61	6·62	8·01
Publicity	3·11	1·71	2·70	3·52
Merchandising	8·23	8·21	8·79	9·82
Despatch	2·39	1·50	1·84	2·19

When a measure of dispersion is associated with the averages for particular items in the 52 cost headings which are distinguished, the spread is inevitably wider. For two of the items—Press Advertising and Buying—the dispersion has a special significance in relation to the size of store.

TABLE VI.

Showing the Range of Deviation from the Average Figures of Press Advertising Expense.

	Weighted Average	Lower Quartile	Median	Upper Quartile
All Stores	1·37	0·51	0·83	1·48
London	1·42	0·21	1·23	2·47
Provinces	1·33	0·56	0·80	1·31
High	1·37	0·50	0·77	1·44
Low	1·38	0·51	0·89	1·66
Sales :				
Under £100,000	0·81	0·37	0·68	0·98
£100,000—£250,000	1·01	0·50	0·76	1·05
£250,000—£500,000	0·83	0·39	0·74	1·32
Over £500,000	1·54	0·88	1·74	2·37
High :				
Sales :				
Under £250,000	1·06	0·43	0·66	0·90
Over £250,000	1·40	0·71	1·04	1·88
Low :				
Sales :				
Under £250,000	0·96	0·40	0·78	1·12
Over £250,000	1·41	0·55	1·29	1·82

TABLE VII.

Showing the Range of Deviation from the Average Figures of Buying Expense.

	Weighted Average	Lower Quartile	Median	Upper Quartile
All Stores	1·90	2·07	2·55	3·05
London	1·89	2·07	2·33	2·74
Provinces	1·91	2·06	2·59	3·19
High	2·06	2·26	2·68	3·21
Low	1·79	1·91	2·40	2·87
Sales :				
Under £100,000	3·14	2·57	2·95	3·67
£100,000—£250,000	2·73	2·42	2·84	3·31
£250,000—£500,000	2·54	2·31	2·50	2·74
Over £500,000	1·61	1·44	1·88	2·10
High :				
Sales :				
Under £250,000	3·00	2·65	2·96	3·59
Over £250,000	1·96	2·07	2·38	2·88
Low :				
Sales :				
Under £250,000	2·74	2·15	2·79	3·38
Over £250,000	1·67	1·73	2·07	2·37

THE SIGNIFICANCE OF PRESS ADVERTISING

The table of dispersions relating to expenditure upon Press Advertising is important for the light that it almost certainly throws upon the drawing power of this form of publicity. The weighted average figure in the first column is above that of the median store in twelve of the thirteen groups which are separately analysed. For the weighted average to be affected in this way, it is necessary that a minority of the stores (less than half in view of the median figure) which spend more than the weighted average figure on Press Advertising, secure a sufficiently large share of the total business to pull that average above the median. It is perhaps a little disturbing to note that the only group of stores to which this does not apply is that consisting of stores with the largest sales of all.

The table shows the wide differences which obtain in the Press Advertising Expense of department stores. While one-quarter spent less than 0.51 per cent. of their sales, another quarter spent more than 1.48 per cent.

The drawing power of Press publicity is particularly evident in the case of the small stores (sales less than £250,000) in the higher class of trade. The weighted average figure is greater than the upper quartile; so much is spent by fewer than a quarter of the stores concerned which secure a large share of the total business.

THE INDIVISIBILITY OF THE BUYING EXPENSE

The table of dispersions relating to the Buying Expense is still more illuminating. It shows that the practice of individual stores deviates much less from the average than is the case with their Press Advertising. Nevertheless, the weighted average is generally below the median figure; the stores which secure a more than proportionate share of the business report a Buying Expense well below the average. The association of a low Buying Expense with the power to secure a large share of the business is well exemplified by the figures for the larger stores (sales over £250,000 in both classes of trade). Three-quarters of these stores report a Buying Expense higher than the average.

The table serves to show the extent to which low Buying Expenses are the privilege of the larger stores. The separate analysis of four size-groups shows that a large majority of the stores with sales in excess of £500,000 (certainly more than three-quarters of them, the upper quartile being 2.10 per cent.) record Buying Expenses lower than those obtained by more than three-quarters of the stores in the other three size-groups (lower quartiles 2.57, 2.42 and 2.31 respectively).

DYNAMIC ANALYSIS: COMPARISONS OVER TIME

We have concentrated hitherto in this paper upon giving an account of the type of analysis of retail costs upon a comparative basis which has the most obvious interest to the shopkeeper. It is static. It serves to show him where he stands, in any one financial period, in comparison with the other businesses with which he is anxious to compare his experience.

Far more than this is possible when a sufficient number of firms is prepared, as in the case of the department stores of Great Britain, to supply the full detail of their operating experience regularly year by year. Dynamic analysis then becomes possible. Information of very great value can then be made available to economists concerning the process of adaptation of business activity to changing market conditions. To the business man himself the value of the new information is no less great. He is enabled to compare the extent of his own readjustment with that which has been more generally achieved. He can measure the trend and amplitude of fluctuation of his own business experience against that of his fellows.

Within the confines of this paper it is not possible to do more than illustrate methods of analysis from investigations which have so far been undertaken. The methods illustrated are capable of wide application, and it is believed may prove to be of the first importance both to the trades to which they can be applied, and to the student of social phenomena.

They fall into two categories.

The first represents a contribution to the study of trade fluctuations. It traces the relation between yearly variations in the volume of sales, in the cost of the goods sold, and in the costs incurred in the process of retailing. The purpose is to reveal divergences in the rate of change of the various components. It is undertaken for groups of stores classified regionally and according to their class of trade.

The second method consists in grading stores in reference to the rate of change in the magnitude of a given variable, and analysing for each grade the rate of change of each of the principal operating figures of the stores in that group, so as to reveal the concomitant variations. It is a study of the elasticities of variation of the various items within the period of the year's accounts. The two examples that are taken will, it is hoped, sufficiently illustrate the nature and practical significance of this procedure.

(i) Seven Years of Operating Experience of a Constant Sample

In each of the seven years 1931-2 to 1937-8 eighty-nine department stores in Great Britain, with sales aggregating £50,832,763 in the last year, have supplied a record of their operating experience. Twenty-seven operate in London and sixty-two in the Provinces. Thirty-nine are concerned with the high class of trade and fifty with the low.

Table VIII which follows sets out as percentages of the sales in each of the seven years 1931 to 1937 the main divisions of operating figures relating to a constant sample of 89 department stores. The financial year, February 1st, 1931, to January 31st, 1932, is referred to as 1931, and so on.

Of what value are these figures ? It is clearly of interest to the shopkeeper to know whether stores in general have reacted to market changes year by year in the same way as his own business.

To the economist, and particularly to the student of business fluctuations, these figures are probably still more illuminating. The Gross Margins of these eighty-nine department stores represent their contribution to the national dividend. It is the value added at the retail stage, the amount distributed to the factors of production there employed. It will be seen that in the period 1932 to 1937, when the value of the sales of these stores increased, their Gross Margins rose as a percentage of sales, and therefore rose absolutely also. This section of the retail trade took a larger share of the aggregate receipts from the sale of the consumers' goods which passed through it. It must be borne in mind that the percentage of Gross Margin is a percentage of sales and does not measure the money charge made by retailers for distributing each physical unit of goods. It cannot, therefore, be inferred that a fairly constant Gross Margin percentage implies that the retail trade is charging a constant amount for distributing an article ; as its wholesale price falls a constant percentage of " mark-up " yields

Table VIII.

OPERATING EXPERIENCE OF 89 DEPARTMENT STORES IN GREAT BRITAIN FOR EACH OF THE YEARS 1931 TO 1937.

	B.O.T. Wholesale Prices—Manufactured Articles Adjusted	Index of Net Sales	Gross Margin	Total Expenses	Net Margin	Expenses		Administration	Occupancy	Publicity	Merchandising	Despatch
						Impersonal	Personal					
All Stores :												
1931 ..	96·5	99·71	29·89	23·24	6·65	10·37	12·87	4·64	5·35	2·93	8·03	2·29
1932 ..	95·5	95·00	29·85	24·16	5·69	10·87	13·28	4·86	5·68	3·07	8·16	2·39
1933 ..	96·4	96·67	30·23	24·04	6·19	10·88	13·16	4·80	5·78	3·09	8·02	2·34
1934 ..	97·7	98·66	30·39	24·31	6·08	11·05	13·26	4·80	5·87	3·16	8·08	2·39
1935 ..	97·8	99·80	30·95	24·33	6·62	11·04	13·28	4·85	5·91	3·10	8·08	2·36
1936 ..	101·2	103·65	31·14	24·34	6·79	11·09	13·26	4·84	5·99	3·06	8·07	2·39
1937 ..	114·9	106·72	31·44	24·74	6·70	11·22	13·52	4·97	6·01	3·13	8·20	2·43
London												
1931 ..		98·92	30·46	24·27	6·19	11·08	13·19	5·05	5·31	3·34	7·94	2·63
1932 ..		94·92	30·50	24·94	5·56	11·54	13·40	5·16	5·61	3·44	8·00	2·73
1933 ..		96·93	31·01	24·76	6·25	11·40	13·35	5·07	5·70	3·38	7·95	2·67
1934 ..		98·92	31·24	24·83	6·42	11·40	13·42	5·06	5·73	3·37	7·98	2·68
1935 ..		99·88	31·62	24·91	6·71	11·41	13·50	5·09	5·92	3·25	8·00	2·65
1936		103·76	31·98	24·86	7·12	11·39	13·48	5·06	5·96	3·19	8·00	2·67
1937 ..		106·67	32·26	25·47	6·79	11·73	13·73	5·17	6·10	3·36	8·15	2·69

Provinces :												
1931 ..		100·70	29·18	21·96	7·22	9·49	12·47	4·13	5·41	2·41	8·14	1·87
1932 ..		95·10	29·03	23·17	5·86	10·03	13·14	4·47	5·77	2·62	8·36	1·96
1933 ..		96·34	29·23	23·12	6·11	10·21	12·91	4·46	5·90	2·73	8·11	1·93
1934 ..		97·85	29·30	23·65	5·65	10·60	13·06	4·47	6·06	2·88	8·21	2·03
1935 ..		99·71	30·11	23·59	6·51	10·59	13·01	4·55	5·97	2·90	8·18	2·00
1936 ..		103·52	30·06	23·68	6·38	10·71	12·98	4·56	6·03	2·90	8·16	2·04
1937 ..		106·77	30·41	23·82	6·60	10·56	13·26	4·72	5·90	2·84	8·25	2·10
High-Medium												
1931 ..		95·23	31·10	25·08	6·02	11·81	13·26	5·40	5·90	3·21	8·05	2·51
1932 ..		92·14	31·11	25·62	5·50	12·23	13·39	5·53	6·04	3·42	8·06	2·58
1933 ..		95·24	31·76	25·29	6·46	12·03	13·27	5·42	6·00	3·44	7·90	2·54
1934 ..		99·09	32·12	25·36	6·76	12·00	13·36	5·40	6·03	3·07	7·89	2·54
1935 ..		101·75	32·38	25·44	6·94	12·10	13·34	5·36	6·28	3·38	7·91	2·49
1936 ..		106·95	32·67	25·22	7·45	11·94	13·28	5·34	6·26	3·30	7·84	2·48
1937 ..		109·61	33·06	25·68	7·38	12·09	13·60	5·46	6·32	3·33	8·03	2·55
Medium-Low												
1931 ..		102·59	29·17	22·14	7·02	9·51	12·63	4·18	5·03	2·76	8·02	2·16
1932 ..		96·84	29·07	23·26	5·81	10·04	13·22	4·44	5·47	2·87	8·22	2·27
1933 ..		97·59	29·27	23·25	6·02	10·16	13·09	4·42	5·64	2·88	8·09	2·22
1934 ..		98·03	29·27	23·63	5·64	10·44	13·19	4·42	5·77	2·93	8·21	2·30
1935 ..		98·55	30·01	23·60	6·41	10·35	13·25	4·51	5·71	2·90	8·19	2·28
1936 ..		101·53	30·10	23·74	6·35	10·50	13·24	4·49	5·81	2·90	8·23	2·32
1937 ..		104·86	30·35	24·10	6·25	10·63	13·47	4·64	5·81	3·00	8·31	2·35

TABLE IX.

PERCENTAGE CHANGE IN SALES, GROSS MARGIN, NET MARGIN AND IN THE MAIN EXPENSE DIVISIONS OF 89 DEPARTMENT STORES IN GREAT BRITAIN.

	PERCENTAGE CHANGE IN										
	Net Sales	Gross Margin	Total Expenses	Net Margin	Impersonal Expenses	Personal Expenses	Administration	Occupancy	Publicity	Merchandising	Despatch
All Stores :											
1931 to 1932 ..	—4·73	—4·85	—0·96	—18·46	—0·13	—1·63	—0·22	+1·12	+0·09	—3·18	—0·85
1932 to 1933 ..	+2·27	+3·05	+1·25	+10·68	+1·82	+0·79	+0·86	+3·57	+2·35	—0·01	—0·09
1933 to 1934 ..	+1·84	+2·39	+3·01	— 0·02	+3·47	+2·63	+1·88	+3·44	+4·00	+2·68	+4·04
1934 to 1935 ..	+1·37	+3·25	+1·44	+10·48	+1·30	+1·56	+2·40	+2·52	—0·65	+1·32	+0·06
1935 to 1936 ..	+3·86	+4·47	+3·91	+ 6·54	+4·24	+3·64	+3·53	+4·73	+2·58	+3·74	+4·95
1936 to 1937 ..	+2·96	+3·97	+4·64	+ 1·57	+4·18	+5·03	+5·82	+3·35	+5·41	+4·55	+4·82
London :											
1931 to 1932 ..	—4·05	—3·93	—1·40	—13·85	—0·06	—2·53	—1·88	+1·38	—1·39	—3·28	—0·49
1932 to 1933 ..	+2·13	+3·84	+1·38	+14·90	+0·89	+1·80	+0·33	+3·62	+0·33	+1·43	—0·06
1933 to 1934 ..	+2·05	+2·82	+2·33	+ 4·75	+2·10	+2·53	+1·81	+2·69	+1·93	+2·56	+2·50
1934 to 1935 ..	+0·97	+2·19	+1·31	+ 5·59	+0·94	+1·63	+1·56	+4·33	—2·63	+1·16	—0·20
1935 to 1936 ..	+3·88	+5·07	+3·68	+10·23	+3·70	+3·66	+3·26	+4·52	+1·73	+3·87	+4·40
1936 to 1937 ..	+2·81	+3·69	+5·32	— 2·01	+5·96	+4·79	+5·05	+5·26	+8·39	+4·75	+4·04

Provinces :											
1931 to 1932 ..	−5·56	−6·04	−0·35	−23·35	−0·22	−0·44	+2·30	+0·79	+2·62	−3·06	−1·49
1932 to 1933 ..	+1·30	+2·00	+1·08	+ 5·64	+3·17	−0·52	+1·04	+3·51	+5·69	−1·74	−0·12
1933 to 1934 ..	+1·56	+1·81	+3·93	− 6·21	+5·40	+2·76	+1·99	+4·37	+7·25	+2·86	+6·76
1934 to 1935 ..	+1·89	+4·69	+1·62	+17·49	+1·79	+1·47	+3·60	+0·34	+2·30	+1·51	+0·50
1935 to 1936 ..	+3·83	+3·69	+4·22	+ 1·74	+4·97	+3·61	+3·90	+5·00	+3·79	+3·59	+5·88
1936 to 1937 ..	+3·14	+4·34	+3·74	+ 6·61	+1·79	+5·34	+6·90	+0·96	+1·25	+4·31	+6·10
High :											
1931 to 1932 ..	−3·25	−3·17	−1·15	−11·58	+0·17	−2·33	−1·00	−1·05	+2·82	−3·04	−1·76
1932 to 1933 ..	+3·37	+5·47	+2·06	+21·34	+1·66	+2·42	+1·27	+2·85	+4·00	+1·25	+1·85
1933 to 1934 ..	+4·05	+5·22	+4·33	+ 8·72	+3·81	+4·80	+3·70	+4·46	+6·28	+3·90	+4·04
1934 to 1935 ..	+2·68	+3·52	+2·97	+ 5·56	+3·50	+2·50	+2·01	+7·04	−0·85	+2·96	+0·67
1935 to 1936 ..	+5·11	+6·07	+4·23	+ 8·59	+3·78	−3·08	+4·69	+4·75	+2·19	+4·22	+4·77
1936 to 1937 ..	+2·49	+3·70	+4·35	+ 1·50	+3·72	+3·92	+4·77	+3·36	+3·40	+5·96	+5·31
Low :											
1931 to 1932 ..	−5·61	−5·92	−0·83	−21·98	−0·35	−1·19	+0·39	+2·63	−1·82	−3·24	−0·99
1932 to 1933 ..	+0·78	+1·47	+0·71	+ 4·50	+1·94	−0·23	+0·13	+4·06	+1·14	−0·76	−1·43
1933 to 1934 ..	+1·57	+1·81	+3·93	− 5·91	+3·21	+1·25	+0·48	+2·77	+2·30	+1·94	+4·05
1934 to 1935 ..	+0·52	+3·06	+0·38	+14·30	−0·34	+0·94	+2·70	−0·54	−0·49	+0·29	−0·30
1935 to 1936 ..	+3·03	+3·33	+3·68	+ 2·05	+4·59	+3·10	+2·62	+4·71	+2·89	+3·44	+5·09
1936 to 1937 ..	+3·28	+4·17	+4·85	+ 1·62	+4·53	+5·10	+6·67	+3·34	+6·95	+4·29	+4·46

less and less money to the retailer. A constant Gross Margin percentage does not imply inflexibility of the charges made by retailers.

A necessary disadvantage of expressing expenses and margins as a percentage of sales is that such ratios conceal movements in the numerator and denominator. An increase in the Net Margin percentage may conceal a reduction in its money value, and it is with the money value of margins and expenses that retailers are concerned. A reduction in the Net Margin as a percentage of sales will not be disadvantageous if the Net Margin in terms of money is increasing. Table IX therefore records percentage changes in the actual money amounts of sales, margins and expenses.

It is now possible to make a number of significant comparisons. Firstly it can be seen whether the rate of change of sales or of any expense division is greater in one region than in another, or in one class of trade. For example, consider changes between 1931 and 1932. The fall in sales volume was proportionately greater in the Provinces and in the low class of trade than in London or the high class of trade. Again, the table throws light on the relative flexibility of different groups of expense. In each group distinguished Total Expenses fell less than Sales; but Personal Expenses were reduced more than Impersonal Expenses. The latter indeed rose slightly in the high class trade. In 1932 a greater proportionate reduction was obtained in Merchandising Costs (entirely Personal) than in any of the other four main divisions of expense. Occupancy costs actually increased, except in the high class trade; and, perhaps less surprisingly, Publicity also increased in the high class trade and in the Provinces.

In each of the years after 1932 sales increased when compared with the previous year; but the rate of increase was not unchanged over the period. Nor was it uniform between different regions and between the two classes of trade. In general the rate of expansion of sales volume fell off until 1936, when it showed a sudden rise, but the rate of increase was reduced again in 1937. The rate of change of Gross Margins follows fairly closely that of sales; thus in 1937, although Gross Margin percentage rose, the rate of expansion in its money value declined in London and in the high class trade. Total Expenses (except in the Provinces) show an increasing rate of expansion since 1934. Net Margin in consequence has almost ceased to expand. If the underlying factors responsible for rates of change in these variables continue to operate, it may safely be predicted that the money value of Net Margin will be reduced in succeeding years. The table brings out the useful information that the fall in the percentage of Net Margin of London Stores from 7.12 to 6.79 between 1936 and 1937 represents in fact a reduction in the actual money value of their Net Margin.

The utility of the table can be illustrated by one other small comparison. It has already been remarked that when sales fell between 1931 and 1932 the Provincial stores and those transacting high class business raised their Publicity expenditure ; and the table confirms the point. It shows further that in 1937 when the London stores suffered an actual fall in Net Margin in terms of money, they did so despite an increased expenditure on Publicity of 8.39 per cent.

The type of analysis adopted in this table is, of course, marginal analysis. Therein lies its value to the shopkeeper. If he will set out his own figures to show the extent to which his expenses rise and fall in terms of money with the value of business done, he can compare those figures with the combined experience of comparable stores. If his own business compares unfavourably in its trading results with that of the other stores in the sample he can discover whether that fact is due to relatively unfavourable sales experience or to inability to reduce particular expenses or prevent their rising as much as those of other stores.

The relative elasticity of the various expense items can be compared directly if index numbers are compiled for the various expenses. Comparisons can then be made between the different expenses and margins, and, for any particular item, between regions and classes of trade. In Table X which follows indices are given for sales, gross and net margins and the main expenses, based in each case on the average figure for the seven years.

While there is little difference in the relative variability of sales and gross margins in the two regional groups, the same is not true when the classes of trade are compared. Stores doing the high class trade show a much greater variation than the remainder. Total Expenses also show a greater flexibility in the high class trade, and in consequence

TABLE X.

INDICES OF SALES, GROSS MARGIN, NET MARGIN AND THE MAIN EXPENSE DIVISIONS OF 89 DEPARTMENT STORES IN GREAT BRITAIN. (AVERAGE 1931 TO 1937 = 100.)

	Net Sales	Gross Margin	Total Expenses	Net Margin	Impersonal Expenses	Personal Expenses	Administration	Occupancy	Publicity	Merchandising	Despatch
All Stores											
1931..	99·71	97·48	95·86	103·58	94·57	96·93	95·87	91·89	94·86	98·94	96·41
1932..	95·00	92·75	94·94	84·46	94·45	95·35	95·66	92·92	94·94	95·79	95·58
1933..	96·67	95·58	96·13	93·48	96·17	96·10	96·26	96·23	97·17	95·79	95·50
1934..	98·66	97·86	99·02	93·47	99·50	98·62	98·07	99·55	101·06	98·36	99·36
1935..	99·80	101·04	100·45	103·26	100·80	100·17	100·42	102·06	100·40	99·65	99·42
1936..	103·65	105·56	104·38	110·01	105·07	103·97	104·40	106·89	102·99	103·38	104·35
1937..	106·72	109·75	109·22	111·73	109·46	109·03	110·02	110·46	108·56	108·09	109·38
London:											
1931..	98·92	96·21	96·54	94·95	95·95	97·05	98·02	91·11	99·33	98·10	97·31
1932..	94·92	92·43	95·19	81·80	95·89	94·59	96·18	92·37	97·95	94·89	96·84
1933..	96·93	95·98	96·50	93·99	96·74	96·28	96·49	95·71	98·27	96·24	96·78
1934..	98·92	98·69	98·75	98·45	98·77	98·73	98·25	98·29	100·17	98·67	99·19
1935..	99·88	100·85	100·05	103·95	99·71	100·34	99·78	102·54	97·53	99·82	99·00
1936..	103·76	105·96	103·73	114·58	103·39	104·01	103·04	107·17	99·22	103·68	103·35
1937..	106·67	109·87	113·16	112·28	109·55	108·99	108·24	112·81	107·55	108·60	107·53

Provinces :											
1931..	100·70	99·16	94·94	114·66	92·64	96·97	92·70	92·86	88·05	99·98	94·87
1932..	95·10	93·17	94·61	87·88	92·43	96·34	94·94	83·60	90·36	96·91	93·46
1933..	96·34	95·03	95·63	92·84	95·36	95·84	95·83	96·88	95·50	95·23	93·34
1934..	97·85	96·75	99·39	87·07	100·52	98·49	97·73	101·93	102·43	97·97	99·65
1935..	99·71	101·29	100·99	102·37	102·32	99·94	101·25	101·46	104·78	99·45	100·15
1936..	103·52	105·02	105·26	104·15	107·41	103·55	105·30	106·53	108·75	103·21	106·04
1937..	106·77	109·58	104·19	111·13	109·33	109·08	112·46	107·55	110·11	107·45	112·51
High-Medium											
1931..	95·23	92·35	94·06	85·85	93·53	94·54	94·95	91·72	90·87	86·38	94·62
1932..	92·14	89·42	92·98	75·91	93·69	92·34	94·03	90·84	93·44	93·42	94·01
1933..	95·24	94·31	94·89	92·11	95·24	94·57	95·22	93·34	97·18	94·58	95·75
1934..	99·09	99·24	99·00	100·15	98·87	99·12	98·75	97·50	103·27	98·28	99·62
1935..	101·75	102·73	101·94	105·72	102·33	101·59	100·74	104·37	102·40	101·19	100·29
1936..	106·95	108·96	106·25	119·24	106·20	106·31	105·46	110·20	104·64	105·45	105·07
1937..	109·61	113·00	110·88	121·03	110·14	111·54	116·33	113·00	108·20	110·69	110·72
Medium-Low :											
1931..	102·59	101·05	97·11	115·83	95·35	98·49	96·47	92·02	97·85	100·54	97·68
1932..	96·84	95·06	96·31	90·37	95·02	97·31	96·84	94·44	96·07	97·28	96·71
1933..	97·59	96·46	96·99	94·43	96·86	97·09	96·96	98·27	97·17	96·54	95·32
1934..	98·03	96·90	99·04	88·85	99·98	98·31	97·43	100·99	98·40	98·41	99·18
1935..	98·55	98·83	99·41	101·56	99·64	99·23	100·07	100·44	98·91	98·69	98·81
1936..	101·53	103·19	103·07	103·64	104·21	102·18	102·69	105·17	101·76	102·08	103·83
1937..	104·86	107·49	108·07	105·32	108·94	107·39	109·54	108·68	108·83	106·46	108·47

the fluctuations in their Net Margin were much more violent. Are wage costs more or less flexible than the other items ? In the high class trade there is very little difference in the relative variability of Impersonal and Personal expenses, when taken in the aggregate. But Merchandising Expense, which is wholly Personal, varies less after 1932 than any of the other four main divisions ; while Occupancy, which is largely Impersonal, shows the greatest variability. In the low class of trade Impersonal Expenses in aggregate display a clearly greater variability than Personal Expenses. Merchandising costs vary less proportionately than either Occupancy or Administration. In both classes of trade Despatch costs appear to vary proportionately with Merchandising expenses. As regards Publicity, stores in London show hardly any variation in this expense between 1931 and 1936, but a sharp rise in 1937. In the Provinces, on the other hand, Publicity expenditure rose continuously over the period to a level 10 per cent. above the average for the seven years.

(ii) Two Examples of Analysis according to Rate of Change of a Given Variable

We turn now to the second category of dynamic analysis in which the sample is split into grades in reference to the rate of change of a given variable, so that the extent of variations in the principal operating figures of the stores in each grade can be compared with the others. Two examples are taken.

(*a*) Analysis According to the Rate of Change of Sales

The first example relates to changes in sales, and the two years 1933 and 1934 are taken for purposes of illustration. The stores which contributed operating figures for both years are grouped according to the extent to which they experienced a change in sales volume. Those which suffered a decrease in sales of more than 4 per cent. are separated from those whose sales declined by less than 4 per cent. In the same way those experiencing an increase in sales of over 8 per cent. are separated from others whose sales rose by between 3 to 8 per cent. and from a third category in which the increase was less than 3 per cent.

The obvious advantage of this method of analysis is that any aggregate or average figure of the change in sales in each group is a resultant of individual figures all moving in the same direction at broadly the same rate. We may therefore expect them to throw light on the relationship between a particular rate of change of sales and the rate of change in operating figures. A shopkeeper with a given sales experience may compare the changes in his own operating figures with those of the appropriate group.

There are 107 stores in this sample and the distribution is shown in the following table.

Change in Net Sales 1933 to 1934	Average Percentage change in sales	No. of Stores	Average Size of Store in 1934 (Net Sales per annum) £
Decrease—			
Over 4%	— 6.54	10	168,000
0 — 4%	— 2·06	22	522,000
Increase—			
0 — 3%	+ 1·22	35	588,000
3 — 8%	+ 5·23	25	475,000
Over 8%	+12·55	15	304,000

A reduction in sales was reported mainly by stores in the low class of trade; increases were enjoyed mainly in the higher class.

The relation between the rates of change of Sales and the rates of change of Gross Margin and Expenses is set out, for these five groups of stores, in the two Tables XI and XII which follow.

TABLE XI.

Percentage Changes in the Absolute Figures of Net Sales, Gross and Net Margins and Expenses in 1934 as compared with 1933.

Change in Net Sales, 1933 to 1934	Average Percentage Change in Sales	Gross Margin	Total Expenses	Net Margin	Impersonal Expenses	Personal Expenses
Decrease :						
Over 4% ..	— 6·54	—13·29	— 0·29	—118·14	+ 0·97	— 1·38
0—4% ..	— 2·06	— 1·91	— 0·66	— 7·04	+ 1·45	— 2·41
Increase :						
0—3% ..	+ 1·22	+ 1·86	+ 1·63	+ 2·81	+ 1·05	+ 2·10
3—8% ..	+ 5·23	+ 6·81	+ 7·29	+ 5·28	+ 7·32	+ 7·27
Over 8% ..	+12·55	+13·04	+11·20	+21·48	+11·21	+11·19
All Stores ..	+ 2·01	+ 2·52	+ 3·09	+ 0·22	+ 3·43	+ 2·81

TABLE XII.

Percentage Changes in the Absolute Figures of Main Expense Divisions in 1934 as compared with 1933.

Change in Net Sales 1933 to 1934	Adminis-tration	Occu-pancy	Publicity	Merchandising			Despatch	Average Per cent. Change in Sales
				Buying	Selling	Total		
Decrease								
Over 4%	— 1·96	+ 1·09	+ 5·78	+ 1·58	— 5·39	— 2·09	— 3·39	— 6·54
0—4% ..	— 5·34	— 0·27	+ 1·78	— 3·24	+ 0·26	+ 0·47	+ 3·19	— 2·06
Increase								
0—3% ..	+ 1·24	+ 1·60	+ 1·08	+ 1·52	+ 1·96	+ 1·85	+ 2·46	+ 1·22
3—8% ..	+ 8·68	+ 7·61	+ 7·86	+ 3·14	+ 6·97	+ 6·07	+ 7·33	+ 5·23
Over 8%	+10·42	+12·00	+12·90	+ 3·79	+12·06	+ 9·89	+13·37	+12·55
All Stores	+ 2·12	+ 3·31	+ 3·91	+ 1·16	+ 3·29	+ 2·85	+ 4·27	+ 2·01

The previous analysis showed that when sales rose Gross Margins rose; but a defect in the figures was that a rise in aggregate sales frequently was a resultant of diverse movements on the part of individual stores in a sample. The present method of grouping together those stores which have the common characteristic of a given rate of change of sales volume brings out the relationship much less ambiguously. Changes in Gross Margin are shown to have a wider amplitude than sales in both directions, particularly downward. When we look at Total Expenses the result emerges that stores which suffered the greatest loss in sales could hardly reduce their expenses at all. When the main divisions of expense are compared with the Total Expense there are a number of points of interest. Stores with reduced sales increased their Publicity Expense no doubt in the endeavour to check the fall. Merchandising is of particular interest. The Buying Expense is clearly very inflexible; decreased sales involve little opportunity for economy. On the other hand the Selling Expense varies almost proportionately with sales; and the same is true of the costs of delivery.

A separate analysis on these lines has been made for the two classes of trade, and these conclusions are confirmed in both cases.

(*b*) ANALYSIS ACCORDING TO CHANGE IN THE RATE OF STOCK-TURN

The second illustration of this type of analysis relates to changes in the rate of stock-turn. It has for long been held that stock-turn analysis is vital for an understanding of the prosperity of shopkeepers. But the more seriously that analysis is attempted the greater the difficulties which are encountered. Light is thrown on the problem when rates of change of stock-turn are made the basis of analysis. Accordingly stores with given rates of *change* of stock-turn between two years are grouped together, rather than stores which, in a particular year, showed a given rate of stock-turn. In the following tables this analysis is made for 69 stores, for which rates of stock-turn were available in 1934 and 1935. The detail of the sample is as follows :—

Change in Rate of Stock-turn 1934 to 1935	Weighted Average Percentage Change in Rate of Stock-turn	No. of Stores	Aggregate Sales 1935 £	Average Size of Store (Net Sales) per annum) £
Decrease—				
Over 5%	— 6·8	6	3,527,556	587,000
*0—5%	— 2·9	14	6,854,878	490,000
Increase—				
0—5%	+ 2·8	23	18,618,561	810,000
5—10%	+ 7·5	14	8,449,836	604,000
Over 10%	+33·0	12	2,910,094	243,000

*Includes two stores which did not change their stock-turn.

The rates of stock-turn here used are those calculated, as is usual in Great Britain, by dividing the annual net sales by the average value at cost of monthly stocks. While open to objections as a measure of the rate at which stock is replaced it is a true measure of the amount of working capital locked up in stock per £ of sales. An increase of the rate of stock-turn here means an economy in the cost of working capital per £ of sales.

In the following table five groups of stores are separated. Those which showed, in 1935, a decrease of more than 5 per cent. in their rate of stock-turn are separated from those showing less than 5 per cent. decrease. Those reporting an increase of over 10 per cent. are separated firstly from the group with an increase of from 5-10 per cent. and secondly from those whose rate increased by less than 5 per cent.

Very interesting results emerge. In the first place it is possible to say whether a given change in rate of stock-turn is due to a change in sales or to a change in stocks ; and secondly whether the Gross Margin, the Expenses and the

TABLE XIII.

Percentage changes in the Absolute Figures of Net Sales, Average Stocks, Gross and Net Margins and Total Expenses in 1935 as compared with 1934.

Change in Rate of Stock-Turn, 1934 to 1935	Net Sales	Average Stocks	Gross Margin	Total Expenses	Net Margin
Decrease :					
Over 5%	—3·28	+3·8	+0·18	+2·51	—7·03
0—5%	—0·38	+2·6	+2·63	—1·32	+19·43
Increase :					
0—5%	+1·66	—1·2	+3·93	+1·91	+11·14
5—10%	+2·81	—4·4	+3·65	+1·88	+10·34
Over 10%	+0·93	—24·1	+5·04	+1·27	+47·99
All Stores (69)	+1·04	—3·4	+3·40	+1·35	+11·35

Net Margin rose or fell, when expressed in money terms, with the change in rate of stock-turn. The stores with the greatest increase in rate secured it almost entirely by reducing their stocks by over 24 per cent. Their Gross Margin improved, their Expenses hardly rose and their Net Margin showed nearly 50 per cent. rise.

The stores which decreased their rate of stock-turn did not necessarily report a lower Net Margin. Those whose decrease was less than 5 per cent. are seen to have both lower sales and higher stocks, but they improved their Gross Margin and lowered their expenses, thereby securing the second-best increase in Net Margin. It seems to follow that it was by substituting more slowly moving stock that they improved their position.

It will already be clear that a change in the rate of stock-turn may arise in a great variety of ways. It may be due firstly to a change in the volume of sales achieved with a given average stock; and a whole variety of different policies each involving variations in expense figures may bring about a given change in sales. Publicity expenditure may be varied, or the policy with regard to " free " delivery of customers' purchases. Interest will centre upon the variations in expense items with variations in sales, but this analysis is better pursued directly on the lines of the preceding illustration of dynamic analysis, rather than under the guise of stock-turn analysis.

Secondly, the change in rate of stock-turn may be due, as we have seen, to a change in value of the average stock carried. In such a case the only expense item which must necessarily change is the interest on working capital locked up in stock. As in our analysis, interest is included in the Net Margin, a reduction in Stock which increases the Net Margin also reduces the interest charge to be made from that Net Margin, and the improvement in net " profit " is greater even than it looks. Clearly it will not pay to achieve this economy in interest by using methods of reducing stocks which involve additional expenses of operation greater than the saving. The same will apply to the policy of reducing the " mark-up " or initial Gross Margin in order to increase rate of stock-turn, but that does not mean that " mark-downs " should be less drastic where the stock has actually depreciated in value and must be reduced in price if it is to be sold at all.

Our conclusion therefore is that the rate of stock-turn can never be used with confidence as a measure of general operating efficiency. It is always a resultant of operations which affect profits through the main operating figures, viz. : Sales, Gross Margin and Expenses.

The economy of a high rate of stock-turn arises from the indivisibility of stocks. A store must keep a minimum or basic stock if it is to make any sales and an increase in sales will not require a proportionate increase in average stock. But this is only one of the indivisibilities which involve economies for the large-scale operator. The costs of Administration, Occupancy, Buying, Despatch and the like will also tend to fall in varying degrees and within certain ranges. It is important to realise that the resultant optima in scale of operation for each of these expenses taken separately do not all coincide. The resultant optimum position for a store which maximises net profits arises from a nice balance of economies and diseconomies. Each store must be a law unto itself in this respect. In comparing his rate of stock-turn with the average of those achieved by other stores a store-keeper will not wisely emulate, in this regard any more than in others, the standard practice of his kind. Each manager must determine his own goal figures ; the purpose of these comparisons is to enable him to set his own standards with more knowledge than hitherto.

Velocity Analysis and the Theory of the Creation of Deposits

By F. A. Lutz

I

It seems safe to say that the determinants of the income velocity of circulation of money are now fairly well established, and that there is no longer much difference of opinion among the students of the problem. For purposes of the analysis that follows, it will therefore be sufficient if I give only a very brief account of the main factors determining the income velocity of money.[1] (Throughout I am disregarding " money held for speculative purposes ".)

Let us first assume that the whole economic system is one integrated firm which produces and markets the final product continuously; and let us ask how much money is required to finance a given national income PR. We find that under these conditions the required amount of money is primarily dependent on three factors:

(*a*) The period of income payments to productive factors. If we suppose that wage-earners are the only productive factors in the system and that their income-period is one month (the date on which these monthly payments are made being the same for all wage-earners), and we suppose also that they spend their income continuously on the product of the firm, then the amount of money required to finance an annual PR of, say, 4800 is obviously 400. That is, the amount required is equal to the wages paid out to wage-earners at the beginning of each month. The 400 will return during the month, and thus will again be at the disposal of the firm at the beginning of the next month for that month's wage payments. In this case the income velocity will be 12. With *weekly* wage payments (the month having 4 weeks) the amount of money required would be 100, V would be 48.

---

[1] I have analysed these factors in detail in an article entitled " Über die Umlaufsgeschwindigkeit des Geldes ", *Jahrbücher für Nationalökonomie und Statistik*, 1936, p. 385. H. Angel in his article, "The Components of the Circular Velocity of Money," *Quarterly Journal of Economics*, Feb., 1937, has reached very similar results. Cf. also Ellis, " Some Fundamentals in the Theory of Velocity," *Quarterly Journal of Economics*, May, 1938.

(*b*) The extent to which wage earners have *lump-payments* to make which involve the saving up of money beyond their income periods. These lump-payments are associated especially with the purchase of durable goods,[1] the fact that certain goods of daily consumption are paid for only at intervals which are longer than the wage-period, and certain seasonal outlays. The longer are the periods over which the individuals have to accumulate the money, the greater is the total amount of money required by the system as a whole. It can be shown further that if all the consumers make their lump-payments on the same date, the amount of money required will be greater than if different consumers make their payments on different dates. In practice we find that some of these lump-payments, e.g., end-of-month payments, Christmas and holiday expenditures, will tend to be concentrated round certain dates, while others, especially those associated with the purchase of durable goods, will be fairly evenly distributed over time.

(*c*) The extent to which wage-earners hold cash reserves for the precautionary motive. Under dynamic conditions the border-line between these and the balances mentioned under (*b*) is fluid.

Now let us assume that, PR remaining the same, the productive process is differentiated into a number of independent productive units. Under these conditions the amount of money required will be considerably increased as compared with the case of integrated production: in other words V will be reduced. This is due to several new factors which have to be added to those which we found to operate in the case of the integrated firm. Here we have to allow for:

(*d*) The fact that it takes time to make the physical transfer of money. If we assume that the transfer-time is one day, and that there are four stages of production, which buy from each other continuously, and each of which produces the same "added value" (1,200), the *additional* amount of money required to finance our PR of 4,800 is 20.[2]

---

[1] Instalment selling will tend to reduce the amount of money necessitated by this factor and therefore to increase V.

[2] Cf. the arithmetical calculation in my article mentioned above, p. 400 f.

(*e*) The discontinuity of payments *between the stages.* Here it will suffice to point to such factors as the purchase of raw materials and partly-finished goods in lumps (which is frequently associated with the granting of trade credit between stages), and the purchase of durable capital goods. Such factors lead to a considerable increase in the amount of money required, because they involve accumulations of funds by producers.[1]

(*f*) Lack of uniformity in the payments intervals of successive stages. If, for instance, we assume three stages of which the first and second stages both sell on three months' trade credit to the second and third stages respectively, then the amount of money which the third stage accumulates from sales to consumers over the period of three months will be sufficient to finance all the payments between the stages. If, however, we suppose that the second stage grants three months' trade credit to the third stage but pays the first stage continuously, then it is clear that the second stage will need to have funds in hand during the three months, over and above those which are being accumulated during that time by the third stage.

(*g*) The extent to which firms hold cash reserves for the precautionary motive. The size of these reserves will usually bear some relation to the turnover of the firm.

(*h*) The number of stages (degree of differentiation). The significance of this factor is that the more stages there are the larger will be the amount of money necessitated on account of factors *d*, *f* and *g* above.

One way of describing the effect of differentiation is to say that it causes pools of money to collect all the way along the process of production down to the stage of final consumption, pools which would not arise in the case of a completely integrated production process.

II

In what has been said so far, we have implicitly assumed that there was no lending or borrowing in the form either of cash or of bank credit. As a first step towards introducing these types of lending and borrowing operations, we shall assume that there are no banks and that the loans are made directly from person to person.

---

[1] If we assume only two stages, continuous buying between them, monthly wage payments, and continuous spending on the part of the wage-earners, the amount of money required for a *PR* of 4800 is 400. If we now assume that the first stage sells to the second stage (four times a year) on three months' trade credit, the net product of each stage being 2400 during the year, the amount of money which the second stage will need to accumulate over each three monthly period to pay the first stage will be 600. The addition which this will make to the amount of money required will thus be 200. If we were to split up each stage into a number of firms and were to assume that the trade credits granted to different firms fell due on different dates, the result would not be different.

Let us again suppose that there are three stages of production in the economic process. The first stage produces raw materials to the value of 5 each week, its costs consisting as we may assume for the sake of simplicity only of payments to productive factors (wages). The second stage adds five per week to the value of the raw materials and the third again five to the value of the semi-finished product. The wage-period is one week. The final consumers' goods are sold continuously, whereas the goods which are transferred between the stages are sold at the end of each month in lumps when they are paid for immediately.[1]

If there is no lending or borrowing of cash the amount of money necessary to finance the " volume of trade " is clearly 45. The producer of final consumers' goods receives 15 each week from the sale of those goods. Of these 15 he needs 5 for his weekly wage payments. As he does not buy any half-finished products from the second stage until the end of the month, cash will accumulate in his balance until, at the end of the month, that balance amounts to 45. At the close of the last day of the month the final producer pays 40 to the producer in the second stage of which the latter transfers 20 to the producer in the first stage. In consequence, the producers in the first and second stages will now each have 20 in their hands which are sufficient to cover their wage payments over the succeeding month during which time they have no money coming in. The producer in the third (or final) stage will only have 5 which just pays his wages for one week. In the following weeks he is able to pay his wages out of his current receipts which amount to 15 per week. In this example the income velocity of money is $\frac{60}{45}=1\frac{1}{3}$ per month or 16 per year.

If we now introduce lending and borrowing between producers, the picture changes. We may suppose that the producer in the final stage grants direct loans to the producers in the other stages. Each week he receives in from the sale of consumers' goods 15 of which he needs only 5 for his own wage payments. Thus he is in a position to lend to the other two producers the 5 which each of them requires for meeting his wage payments. Under such circumstances the amount of money required by the whole system is only 15.[1] The income velocity of money is now 4 per month or 48 per year as compared with $1\frac{1}{3}$ per month or 16 per year in the previous case.

---

[1] For present purposes it comes to the same thing if we assume that they are sold on monthly trade credit, or that they are sold continuously but are paid for only at the end of the month. The important factor is the discontinuity in the *payments*.

As is shown by this example, in a system where there are cash lending operations between the producers, the little pools of money, which the discontinuity in the payments between the stages would otherwise cause to collect here and there in the productive process, do not come into existence. This means that under such circumstances the amount of money required under the differentiated system would approximate to the amount required under the integrated system. In the most favourable case conceivable, such direct lending operations between the entrepreneurs would reduce the amount of money required to finance a given PR to a figure which is the sum of: the amount that is necessary on account of discontinuity of payments to the productive factors *plus* the amount which is accumulated by consumers for meeting lump expenditures *plus* the cash-reserves of the consumers (the sum of these three items being equal to the amount required in the integrated system) *plus* an amount which is necessitated by the fact that the transfer of cash takes time *plus* the cash-reserves which the firms deem it necessary to hold. If the income recipients were also to lend to entrepreneurs, the necessary amount of money could of course be further reduced.[2]

III

If we now introduce a banking system into the picture, it is clear that producers will no longer lend to each other directly. The usual procedure will be for the producer who has surplus funds to deposit them with a bank, and for the latter to lend out the funds to producers who can make use of them for paying wages.

---

[1] We should obtain the same figures if we assumed that, instead of the final producer lending cash to the first and second producers, the producers in the first and second stages gave trade credit to the second and final stages respectively, but that these trade credits were paid back not in lumps at the end of the month but by weekly instalments.

[2] It is worth while pointing out that so long as we assume wage-periods of a certain finite length (a week or a month) it is not possible, by lending operations, to reduce the amount of money required to finance a given PR to an infinitely small quantity, i.e., to increase V to infinity. This is so even if we abstract from the time element, and from the cost of investment and disinvestment involved in lending money, either of which is itself sufficient to make such a result impossible. Even supposing the wage-earners were willing to lend back to the entrepreneurs for very short periods the money which they intended to spend before the end of the current wage period, they would be unable to do so, since there would be no demand for their cash *within* the wage periods on the part of entrepreneurs.

Suppose[1] that the final seller continuously deposits his current receipts with a bank which, we will assume, is just starting business. Then, if we use the same figures as those used in Section II, and we make up a balance sheet for the bank at the end of each week, we shall find that at the end of the first week there will be deposits of 15, the corresponding assets consisting of 15 cash. (This is on the assumption that the final producer deposits the 5 which he will need for wage payments at the beginning of the next week when he will have to draw them out again.) At the beginning of the second week the bank will lend 5 cash to each of the two other producers for their wage payments, so that the liabilities will now consist of deposits of 10, and the assets of loans of 10. Similar operations will take place at the beginning of the third and of the fourth week. At the end of the month, just before the producers pay each other for their next month's supply of partly finished goods, the deposits will be 45 (standing to the credit of the final producer), cash in the bank will be 15, and loans outstanding 30. The final producer then withdraws cash of 5 for his own wage payments, and transfers deposits of 40 to the second producer in payment for goods purchased. The second producer disposes of these deposits of 40 by transferring 20 to the first producer (in payment for goods), using 15 to pay back his debt to the bank, and drawing out the remaining 5 in cash for his wage bill. The first producer uses his deposits of 20 to pay cash of 5 to his wage earners and to repay his debt of 15 to the bank. Thus by the beginning of the next month all deposits will have disappeared, and the movement described above will start all over again. It may be objected that this movement of deposits does not correspond to what we find in reality, because there are no such ups and downs in the volume of deposits over short periods. But this objection is easily disposed of. Even under the conditions assumed, viz., that the entrepreneurs pay their bank debts back at the end of one month and incur them afresh during the next month, the existence of numerous firms with different payment-dates for the goods they buy from previous stages will average the movements out.[1] All that we should expect to find therefore are movements within the week, due to the circumstance that cash is taken out of the banks at the beginning of each week, for making wage payments, and flows back during the week through retail purchases made by the wage-earners.

---

[1] The analysis given in this paragraph has been worked out in a similar fashion by Valentin Wagner, *Geschichte der Kredittheorien*, Vienna, 1937, p. 203 ff.

In our example bank deposits come into existence only if and when cash is paid into the banking system. But they reach a maximum figure which is several times higher than the figure for the total amount of cash in existence. Nevertheless their coming into existence is neutral towards *PR*. They exert no active influence on the economic situation, i.e., they arise without introducing any dynamic element into the economic system.[2] It is simply as though the banks were to take over the debts and credits of the entrepreneurs in a system such as that analysed in Section II. The amount of deposits on the books of the banks would be just equal to the volume of lending[3] outstanding between producers in a system such as that analysed in the previous Section.[4]

Incidentally, this way of looking at deposits offers an explanation of Wicksell's treatment of them as "virtual velocity of circulation of money". We have seen that in the case where the final producer lends his cash receipts during the month to the other producers, the income velocity of money is higher than in the case where no lending takes place. If we now substitute the agency of the banking system for the direct lending operations between entrepreneurs, we have deposits in the system which are simply a reflection of that increase in the velocity of circulation of cash.

---

[1] As Wagner (op. cit., p. 223) rightly maintains. Cf. also Section IV.

[2] It has to be remembered that we introduced the banking system into a system where there had previously been direct lending between producers. It would be a different matter if we had introduced it into a purely cash system. In that case we should have obtained a rise in prices.

[3] This refers to loans made in the form of cash. The case with trade credit will be taken up in the next section.

[4] The example of direct lending which we used in Section II was, of course, a very simple one. We assumed that the only lender was the final producer, because he was the only one who came into the possession of "accumulations" of cash. Using the same example in this Section, we obtained the result that the only holder of deposits was again the final producer. To make the case more realistic we should have to allow for the existence of lenders, and correspondingly of depositors, *other than* the final sellers. Such might be producers who had to save in order to be able to buy durable capital goods some time in the future. Under a system of direct lending, without the agency of a bank, these producers would themselves lend out the money, say to the entrepreneurs engaged in the production of the capital goods concerned. Under the system of *indirect* lending through the agency of the banks, the credits which the "savers" grant under the system of direct lending would be taken over by the banks, thus giving rise to deposits in the name of the former.

If we call deposits money, it is clear from the foregoing analysis that deposits arise because money is held up in the process of production. They take the place of those "pools of money" which we found to come into existence under a purely cash system in consequence of the discontinuities of payments between entrepreneurs.

There are two questions now to be answered:

(1) What factors determine the required amount of money (cash plus deposits) in a system with banks, always assuming that *PR* is given?

(2) Is it true, as seems to follow from the sort of analysis just outlined, that deposits fulfil a purely static function?

The answer to the first question can be given at once. As deposits take the place of the cash which is held up in the process of production under a purely cash system, we can conclude that their quantity is in the main dependent on the factors (*d*) to (*h*) mentioned in Section I. The amount of cash, on the other hand, is in the main determined by the factors (*a*) to (*c*) in Section I, since we may assume that cash is used exclusively for making payments to the productive factors. Of course, if some of the money which is saved up by the productive factors beyond their income-periods is placed on deposit, less cash will be needed, but more deposits will come into existence instead. The same applies if part of the salaries is paid out by cheque and is disposed of by cheque by the recipients. But it remains true that the quantity of money (cash *plus* deposits) required to finance a given *PR* is still dependent on the same factors as under a purely cash system. This does not, however, mean to say that the total amount of money is at any time necessarily equal to the amount of cash which would be required under a purely cash system. The quantity of money required under a banking system will be *less* than under the purely cash system. The reasons are:

(*a*) It is possible for deposits to go out of existence through the cancellation of bank debts. In the example above deposits rise during the month from zero to 45, i.e., they are at their maximum equal to the amount which is *constantly* necessary under a purely cash system. On the *average*, therefore, the amount of money required is less under a banking system than under a purely cash system, and V consequently greater.[1] Credit may therefore substitute V for M.

(*b*) The possibility of borrowing reduces the quantity of money held by producers for the precautionary motive.

(*c*) If we do not call time- and savings-deposits money, the necessary amount is further reduced, in so far as consumers place the money which they accumulate beyond their income-periods on time-deposit rather than on demand-deposit.

For these reasons, under a banking system, the total quantity of money required to finance a given PR is likely to lie somewhere between the amount of cash needed under the system of direct lending between producers and the amount needed under a purely cash system, and it will undoubtedly be nearer to the latter limit than to the former.

IV

In the analysis above the banks assumed a passive role. Their " creation " of deposits caused no change in the static system, and, accordingly, did not fulfil any " dynamic " function. Wagner, indeed, draws the conclusion : " It is not therefore possible to explain the business expansion and the boom by reference to the action of the banks in supplying money capital in the form of deposits. The demand deposits and the fluctuations in their quantity arise out of quite a different economic function of credit, a function which is essentially static and not dynamic."[2]

The analysis in Section III suggests that there is indeed a case conceivable where this is true. In order, however, to make clear the conditions which have to be fulfilled if the role of banks and of deposits is to be passive, it is necessary to interpret our example " dynamically ". For this purpose we shall use the same set of figures as in our previous example, but shall assume that the activities of the three entrepreneurs represent a net expansion of the economic system. We may suppose that there are unemployed workers, unused stocks of goods in the hands of entrepreneurs, and excess cash in the banking system. Each producer expands by buying the necessary amounts of half-finished goods or raw materials from the stocks of the producer in the preceding stage, and by hiring additional workers. He borrows the money which is necessary for wage payments from the bank. *The producers in the second and third stages obtain trade credit for one month from the producers in the first and second stages respectively.* The stream of money which the final producer receives in from his continuous sales is used by him first to pay back his bank debt (which he incurred for the purpose of making wage payments in the first week) and then to deposit with his bank. On the basis of the figures assumed, it can easily be seen that 15 additional cash will be withdrawn from the bank at the beginning of the first week and will return during the week. In the course of the month the final producer will acquire deposits (which are additional to those that existed before the expansion began) rising to a maximum of 40[1] at the end of the month. The counterbalancing asset of the bank will be loans of 40 to the other two producers (=the sum which they borrowed for wage payments during the month). At the beginning of the next month these new deposits will disappear entirely in the way described in Section III. But as was remarked before, this unreal feature vanishes if we introduce a number of entrepreneurs who repay their debts on different dates. Let us, for instance, suppose that there are four " sets " of three entrepreneurs, each " set " representing a cross-section of the productive process, and that the different " sets " embark on expansion at the beginning of different weeks, each a week later than the one before. Then, assuming that each " set " expands to the extent of 15 per week (equivalent to the expansion of the single " set " in the previous example), the deposits newly coming into existence by the expansionist process will reach a figure of 100 at the end of the fourth week, and they will henceforth always be at this figure at the end of every week. At the beginning of each week they will drop to 40, but the additional deposits *plus* the additional cash-outside-the-bank will always be 100.[1]

---

[1] Compare also the examples given in the next Section, where more than three producers are assumed with the result that we obtain a level of deposits which is *constantly* below the amount of money which takes their place under a purely cash system. It follows from what is said under (*a*) in the text, that if the banks, by buying securities, put the entrepreneurs into funds so that they no longer need to borrow from the banks, the quantity of deposits required to finance a given PR will be augmented.

[2] Wagner, op. cit., p. 328. Wagner seems, however, not to hold to this view constantly : in other parts of his book his ideas are not very far different from those customarily held.

---

[1] Not 45 as in the example used in Section III, because the final producer uses 5 of his receipts to repay the bank debt which he incurred for wage payments at the beginning of the first week.

This example brings us to the following conclusions:

(1) The expansion of the economic system leads to an increase in the volume of deposits to a figure far in excess of the amount of the additional cash in use, simply because the same cash is deposited with the banking system over and over again. The growth of deposits does not contribute in any active way to the expansion, but reflects it rather. The fact that banking statistics show an aggregate of deposits far above the amount of cash in the banking system, is therefore not of itself a sign that the banks must have *created* the whole of the difference. This conclusion is also, of course, somehow implicit in the "multiple expansion" theory of the creation of bank deposits (of the Phillips or Crick variety). That theory explains the creation of deposits by the fact that the same cash (in decreasing amounts) is successively paid into different banks. It does, however, look upon this cash movement rather in the nature of a technical affair between banks (taking place through the clearing) which would disappear if the separate banks were merged into one. In that case the deposits would be regarded as coming into existence by outright creation. In our example we assume throughout only one bank, and still the deposits grow out of the return, again and again, of the same cash *by the public*.

(2) The force which really creates expansion is the trade credit given by producers to one another. The "dynamic" role of the bank consists entirely in the provision of cash, which in modern times is, of course, controlled by the Central Bank.

(3) The bank plays the role of a mere intermediary.

The final producer, instead of paying back his trade credit during the month as cash comes in, deposits his cash with the bank; the bank in turn hands over the cash to the other producers who would have received it directly from the final producer if the latter had repaid part of his trade credit each week. In effect the process is equivalent to an indirect repayment of the trade credit by weekly instalments, in advance of the nominal repayment.

---

[1] Under a purely cash system without any lending the amount of money required for the expansion would be 180. The significance of this difference between the two cases from the standpoint of velocity analysis has already been indicated in the previous Section. It is worth noting, as Wagner has pointed out, that the proportion of cash in circulation to deposits is dependent on the period of payments between producers in relation to the period of wage payments. (But cf. footnote on p. 168). With a given wage period, the longer are the periods of payments between entrepreneurs the more deposits will come into existence and therefore the lower will be the ratio of cash to deposits. "Cash in circulation" does not, of course, mean cash which is always outside the bank. The cash is continually flowing in and out of the bank.

This seems to lead not to a new, but to a very old theory of the function of banks : the function of a mere intermediary. If entrepreneurs have confidence in each other, the power of the banks to create deposits is not essential for the process of expansion. Given the existence of " trust " between entrepreneurs, the expansion of deposits may be merely a passive factor. Nor does a " bank run " produce effects which could not occur in a system of direct lending with no banks. The phenomena associated with a bank crisis could be brought about just as well under a system of purely commercial credit if lenders were suddenly to withdraw their credits.[1]

However, this is not an end to the matter. Let us revert to our old example with three producers, but change *one* assumption. We will suppose that the producers buy their month's supplies of partly finished goods from the preceding stages as before but have to pay *immediately instead of at the end of the month.* They can do this only by borrowing from the bank. In our example the final producer will borrow 45, draw out 5 in cash for his own wage-payments and transfer 40 deposits to the second producer, who will in turn transfer 20 to the first producer in payment for goods bought. The first and second producers will each cash 5 of their respective deposits for their wage-payments at the beginning of the week, so that each has 15 deposits left to his account. The new deposits coming into existence at the beginning of the expansionist process will therefore be 30 (new cash-outside-the-bank *plus* deposits being 45). During the month they will gradually drop to zero as the producers draw them out in cash for wage payments. In contrast to the previous case there will be no piling up of deposits by the final producer, provided, that is, that he uses the cash as it comes in to repay his bank debts. If we again assume four " sets " of three entrepreneurs, which start expanding one after the other as above, we obtain a permanent level of new deposits of 60 (new cash-outside-the-bank will also be 60 at the beginning of the week but will return to the bank during the week).[1]

---

[1] The common effects of the various forms of credit (book credit, bills of exchange, bank credit) were stressed by J. S. Mill, *Principles of Political Economy*, Vol. II, Ch. 12.

In this case the bank has to *create* deposits outright in order for there to be an economic expansion. The essence of the function of the bank in this case can best be grasped if we compare it with the first case. There the producers had confidence in each other and so gave trade credit directly and voluntarily. The banks were simply used as an agency for what amounts to repaying the trade credits in weekly instalments. In the present case, the bank functions in such a way that exactly the same result is reached indirectly. The producers, not having confidence in each other, do not grant trade credit. But the bank intervenes to provide the necessary confidence. The bank says, as it were, to the producer: " Deliver the month's supply of goods to your customer, but instead of giving him credit, give it to me by accepting a bank deposit as payment from your customer, who has acquired this deposit by obtaining credit from me. This customer in turn will then be indebted not to you, as he would be if you gave him direct credit, but to me." The bank's action in this case is thus a way of " inducing " the producer to give trade credit in an indirect manner. The role of the bank in this case is therefore still the role of an intermediary, substituting its confidence for the confidence of others. The existence of the banks does, of course, widen the structure of credit considerably, as they provide confidence on a larger scale than would exist among producers. This is due to the working of the " insurance principle ", because the safety of the credit which a depositor gives to the bank is dependent not on the solvency of one borrower only, as is the trade credit granted by the producer to his customer, but on the solvency of a large number of borrowers.

The modern idea of banks being able to create deposits seemed to be a startling departure from the view held by most economists in the nineteenth century. If, however, we approach this modern idea along the lines followed above, we find that it resolves itself into much the same elements as those which many of the older writers regarded as the essence of banking operations : the provision of confidence which induces the economic subjects to extend credit to each other by using the bank as an intermediary. However, this does not mean to say that the function of the banks, and the role of deposits, is essentially static, as Wagner seems to think. In a system where there is not sufficient provision of direct credit between entrepreneurs, the outright creation of deposits is indispensable in order to bring about economic expansion.

---

[1] It is interesting to note that we do not obtain the same figure for the quantity of money (including deposits) as in the first case where we assumed trade credit; or, in other words, we obtain a different V. Thus the quantity of money necessary for a given PR (under our assumption of continuous repayment of debts) seems also to be dependent on whether goods delivered at the beginning of a certain period are paid for immediately or at the end of the period (trade credit). The ratio of deposits to cash is also influenced by this factor, as a comparison between the two cases shows. If the final seller does *not* repay his bank debt *gradually*, the average figure for deposits during the month will be higher, and V therefore lower.

A Note on the Law Relating to Company Dividends

By Ronald S. Edwards

The partners of a firm are free to withdraw its resources without any legal restriction, save in the event of bankruptcy. Limited companies, however, are subject to statutory control in this matter. A study of these regulations is useful in assessing the ease with which adjustments can be made in the distribution of resources among competing uses. Such a study is interesting because the application of these regulations has involved judicial discussions of terms such as capital and profits.

Limitations on the Company

In the disposal of its resources a limited company is subject (*a*) to the Companies Act which defines the conditions in which "capital" may be reduced or returned, (*b*) to its own Memorandum of Association which limits the objects[1] on which the company's resources may be spent and (*c*) to the provisions of its Articles of Association[2] which normally, though not necessarily, set out the conditions in which dividends may be paid to shareholders. Persons dealing with a company are, of course, deemed to know the Act itself and the contents of the Memorandum and Articles of Association. Possibly the best description of the limitation of the powers of limited companies comes from Lord Herschell in delivering judgment in the House of Lords in the case of Trevor v. Whitworth (1887):

> "What is the meaning of the distinction thus drawn between a company without limit on the liability of its members and a company where the liability is limited,

---

[1] Prior to 1890 the objects could be altered only by a private Act or reconstruction. It is now possible within limits to vary the objects by special resolution confirmed by Court order.

[2] Articles can be altered by Special Resolution which requires a 75 per cent. majority of members voting.

> but, in the latter case, to assure to those dealing with the company that the whole of the subscribed capital, unless diminished by expenditure upon the objects defined by the memorandum, shall remain available for the discharge of its liabilities ? The capital may, no doubt, be diminished by expenditure upon and reasonably incidental to all the objects specified. A part of it may be lost in carrying on the business operations authorised. Of this all persons trusting the Company are aware, and take the risk. But I think they have a right to rely, and were intended by the Legislature to have a right to rely, on the capital remaining undiminished by any expenditure outside these limits, or by the return of any part of it to the shareholders."[1]

REDUCTION OF CAPITAL

The capital of a limited company must not be returned to the shareholders except in circumstances and in a manner defined by the Companies Act, 1929.[2] The Companies Act, 1862, provided no means by which the capital could be reduced, but the Act of 1867 made provision for reduction under the control of the Court and subject to safeguards for the creditors. A decision in 1877[3] threw doubt on the exact meaning of this Act, and further legislation was passed in that year to remove the obscurity. The point at issue concerned the writing off of "paid up capital." The Ebbw Vale Steel, Iron and Coal Company possessed property which had depreciated, and it wished to reduce its paid up capital, to bring it into line with the value of the assets which it represented, and to trade and declare dividends on the diminished figure. The Court's consent was refused, Jessel M. R. saying that you do not reduce capital which has already been paid up and exhausted, "part of the capital has gone already : it has been reduced by a very unpleasant process." The 1877 Act[4] gave power to cancel any lost capital or capital unrepresented by available assets. It also made clear the right of the company (still under Court order) to return capital "which may be in excess of the wants of the company." The present provisions for reduction are set out in Sections 55 to 60 of the Companies Act, 1929. Thus, subject to safeguards which involve the use and expense of legal machinery it is possible (*a*) to acknowledge a fall in the value of the business by writing down paid-up capital and (*b*) to return, subject to conditions, unrequired resources to the shareholders, even though the return amounts to a reduction of capital.

---

[1] 12 App. Cas. 409.

[2] On the relationship between the use of capital and the objects of the company see the detailed judgments in Guinness v. Land Corporation of Ireland 22 Ch. D. 349.

[3] In *re* Ebbw Vale Steel, Iron and Coal Co. 4 Ch. D. 827.

[4] Sect. 3 reads : "The word 'capital' as used in the Companies Act, 1867, shall include paid-up capital ; and the power to reduce capital conferred by that Act shall include a power to cancel any lost capital, or any capital unrepresented by available assets, or to pay off any capital which may be in excess of the wants of the company ; and paid-up capital may be reduced either with or without extinguishing or reducing the liability (if any) remaining on the shares of the company, and to the extent to which such liability is not extinguished or reduced it shall be deemed to be preserved, notwithstanding any thing contained in the Companies Act, 1867."

DIVIDENDS

The only statutory provision restricting dividend payments is the inferential prohibition of a reduction of capital not sanctioned under the machinery provided by the Act. There is no rule of statute law which categorically requires profit to be the basis of a dividend, though it may be that dividends are so commonly thought of as being derived from profits in some sense, that fraud might be proved were a dividend paid otherwise than out of profit *and* without a statement to this effect. Thus Lord Campbell, in the House of Lords, 1849,[1] dealing with the case of an unincorporated company, stated that:

> "Dividends are supposed to be paid out of profits only, and when directors order a dividend, to any given amount, without expressly saying so, they impliedly declare to the world that the company has made profits, which justify such a dividend. If no such profits have been made, and the dividend is to be paid out of the capital of the concern, a gross fraud has been practised, and the directors are not only civilly liable to those whom they have deceived and injured but, in my opinion, they are guilty of a conspiracy, for which they are liable to be prosecuted and punished."

Lord Brougham, in the same case, characterised the payment of dividends out of capital as " a most vicious and fraudulent course of conduct."

---

[1] Burnes v. Pennell 2 H.L. Cas. 497. The business being discussed here was marine insurance and Lord Campbell observed that "there must be infinite difficulty in fixing a fair dividend." His remarks on railways are somewhat amusing. "In Railroad Companies it must be comparatively easy [to fix dividends] for there is no risk to calculate there except (for which there ought to be a handsome reserve) that of killing a certain number of her Majesty's subjects. The directors have only to take an account of receipts and outgoings and, striking a balance according to the ordinary rules of arithmetic, to say how much is to be ascribed to each share." See also R. v. Esdaile 1 F.F. 213.

Mr. J. L. Weiner refers to Lord Campbell's dictum " as nothing more than a judicial elevation of the interpretation currently set on a particular act—what was impliedly said when a dividend was declared was that profits had been earned."[1]

Lord Campbell's view of the relation of dividends to profits has not received statutory recognition[2] unless, of course, it can be shown that the negative rule that dividend payments must not amount to a return of capital *is equivalent* to the statement that dividends can only be paid to the extent that they are covered by profit. Whether these two requirements are reciprocal we shall consider shortly. Many companies, of course, impose upon themselves regulations limiting dividends to profit. It must, however, be remembered that the company can vary, by special resolution, regulations contained in its Articles of Association.

TABLE A

The Companies Act in an appendix provides a model set of articles which any company can adopt, modify or repudiate, as it chooses. One of these rules provides that " No dividend shall be paid otherwise than out of profits."[3] The corresponding article in Table A to the 1862 Act was more restrictive than this, and provided that " No dividend shall be payable except out of the profits arising from the business of the company."[4] The provisions of the present Table A relating to dividends are very widely adopted by companies. There may be two reasons for this. Firstly, it may be felt that the relationship between capital and profit is such that a dividend which does not presuppose the latter is a payment reducing the former; and that the statutory ban on reduction should therefore be enforced by a positive statement in the company's working rules. Secondly, it may be a recognition that a dividend implies in the public mind a profit in some sense, and that a payment in the absence of profit is likely to mislead shareholders and hence should be banned by a definite rule of the company.

---

[1] " Theory of Anglo-American Dividend Law," *Columbia Law Review*, 1928, p. 1046.

[2] It is worth noting that The Limited Liability Act, 1855 (section 9) made directors liable for the debts of the company, if they paid a dividend when the company was known by them to be insolvent, or would become so, as a result of the dividend. Liability was limited to the amount of the dividend. This section is omitted from the 1862 Act.

[3] Companies Act, 1929. First Schedule, Table A, Art. 91.

[4] Companies Act, 1862. First Schedule, Table A, Art. 73. This Article reproduced No. 64 of Table B to the Joint Stock Companies Act, 1856. It is worth observing in view of what follows that No. 65 empowered the directors, at their discretion, before recommending dividends to set aside a fund for *inter alia* " repairing or maintaining the works." It would appear, therefore, that the draftsmen of the Act thought of profits as arising *before* provision for depreciation and imposed no *mandatory* obligation to provide for the latter before paying dividends. The clause is repeated in Table A of the 1862 Act but the 1908 version omits the reference to repairs and maintenance.

PROFIT AND THE LAW

In most judgments concerned with limited companies and the nature of profit a marked reluctance has been shown to attempt any *general* definition of profit. The most remarkable judicial definition is found in a judgment[1] concerning remuneration to be paid out of profits "arising from the business of the company." (The business of the company included the purchase and sale of stocks and shares.) The value of certain securities had proved very difficult to ascertain and had, therefore, been left out of account. When the company was wound up a surplus was shown resulting mainly from the disposal of these particular securities. The lower Court had held that this was not a profit arising from the business of the company because it was obtained in the ultimate realisation of the whole of the property and assets of the company. Reversing this judgment Fletcher Moulton L. J. said:

> "The word 'profits' has, in my opinion, a well defined legal meaning, and this meaning coincides with the fundamental conception of profits in general parlance, although in mercantile phraseology the word may at times bear meanings indicated by the special context which deviate in some respects from this fundamental signification. 'Profits' implies a comparison between the state of a business at two specific dates usually separated by an interval of a year. The fundamental meaning is the amount of gain made by the business during the

---

[1] In *re* Spanish Prospecting Co. Ltd. 1911, 1 Ch. 93. Another interesting judgment is that of Lord Shand (City of Glasgow Bank v. Mackinnon (19 Sc. Law Reports, 278; 9 Court of Sessions Cas. 4th Series 535). "In order to ascertain the profits earned and divisible at any time, the balance-sheet must contain a fair statement of the liabilities of the company, including its paid-up capital; and on the other hand, a fair, or more properly, bona fide valuation of assets, the balance, if in favour of the company, being profits. These profits may, and must often to a great extent, be represented by obligations of debtors, often secured, and by direct securities over property. They are not the less profits fairly realised and divisible because they exist in that form and have not been received in cash." (Quoted 35 Ch. D. 507). See also Kekewich J. in Bishop v. Smyrna and Cassaba Rly. Co. 1895, 2 Ch. 265.

year. This can only be ascertained by a comparison of the assets of the business at the two dates."

"For practical purposes these assets in calculating profits must be valued and not merely enumerated. An enumeration might be of little value. Even if the assets were identical at the two periods it would by no means follow that there had been neither gain nor loss, because the market value—the value in exchange—of these assets might have altered greatly in the meanwhile. A stock of fashionable goods is worth much more than the same stock when the fashion has changed, and to a less degree, but no less certainly, the same considerations must apply to buildings, plant, and other fixed assets used in the business, because one form of business risk against which business gains must protect the trader is the varying value of the fixed assets used in the business. A depreciation in value, whether from physical or commercial causes, which affects their realisable value is in truth a business loss."

"We start, therefore, with this fundamental definition of 'profits', namely, if the total assets of the business at the two dates be compared, the increase which they show at the later date as compared with the earlier date (due allowance, of course, being made for any capital introduced into or taken out of the business in the meanwhile) represents in strictness the profits of the business during the period in question."

"But the periodical ascertainment of profits in a business is an operation of such practical importance as to be essential to the safe conduct of the business itself. To follow out the strict consequences of the legal conception in making out the accounts of the year would often be very difficult in practice. Hence the strict meaning of the word 'profits' is rarely observed in drawing up the accounts of firms or companies. These are domestic documents designed for the practical guidance of those interested and, so long as the principle on which they are drawn up is clear, their value is diminished little, if at all, by certain departures from this strict definition which lessen greatly the difficulty of making them out. Hence certain assumptions have become so customary in drawing up Balance Sheets and Profit and Loss Accounts that it may almost be said to require special circumstances

> to induce parties to depart from them. For instance, it is usual to exclude gains and losses arising from causes not directly connected with the business of the company—such, for instance, as a rise in the market value of land occupied by the company. The value assigned to trade buildings and plant is usually fixed according to an arbitrary rule, by which they are originally taken at their actual cost and are assumed to have depreciated by a certain percentage each year, though it cannot be pretended that any such calculation necessarily gives their true value either in use or in exchange. These, however, are merely variations of practice by individuals. They rest on no settled principle. They mainly arise from the sound business view that it is better to underrate than to overrate your profits, since it is impossible for you to foresee all the risks to which a business may in future be exposed. For instance, there are many sound business men who would feel bound to take account of depreciation in the value of business premises (or in the value of plant especially designed for the production of a particular article) although they would not take account of appreciation in the same arising from like causes. . . . ."
>
> "But though there is a wide field for variation of practice in these estimations of profit in the domestic documents of a firm or company, this liberty ceases at once when the rights of third persons intervene."[1]

The learned judge was careful to point out that this was not a dividend case. The law relating to dividends, if it were founded on this view of profits, would reconcile the statements that capital must not be returned to shareholders and dividends may be paid only out of profits (provided that the opening valuation in calculating the profits were the amount of paid-up capital). It would also lend significance to the 1877 Act which provided machinery by which the figure of capital, i.e., the opening valuation could be specially reduced to take account of losses and permit the resumption of dividends.

---

[1] The discussion is a little spoilt by a reference towards the end of the judgment to goodwill'. "The capital value of goodwill is an alternative to profits, not part of them. It is the price at which a person renounces his rights to future profits. Hence the goodwill of a business can never appear in the calculation of its profits." Assets are valuable because they contribute to future receipts and this applies to goodwill as much as to anything else. Nevertheless, this statement on profits, if we ignore the lapse, is an explicit acceptance of the "increased net worth concept" of income by which capital values at successive dates and income of the intervening period are in rigid relationship.

THE PERIOD PRIOR TO THE COMMENCEMENT OF TRADING OPERATIONS

Between the formation of the company and the date on which it commences to trade, a period may well elapse during which the company is engaged in constructing equipment necessary for the purpose of its business, and during which no receipts come in, except from shareholders and creditors. In such conditions statutory companies often paid dividends,[1] but is a limited company under the general Acts entitled to do so ? Assuming that expectations have not been falsified, the value of the assets on completion, including unspent cash, must exceed, by the anticipated rate of interest, the amount of capital raised from the shareholders. The payment of a dividend equal to this rate of interest would not reduce the value of the assets below the equivalent of the amount paid in by the shareholders. In MacDougall v. Jersey Imp. Hotel Co.,[2] however, Page-Wood V. C. held that dividends during the building of an hotel must be restrained as lessening the capital to the prejudice of the creditors and in the interests of the company itself. The defendants in this case did not attempt to argue that there had been any profit. In 1882, however, in a case concerning the Alexandra Palace Co.[3] counsel did contend that the dividends during construction were out of profits and not out of capital.[4] The argument failed on the ground that the suggested calculation was " a mere ' paper ' transaction " and the Jersey Hotel decision was followed.[5]

The inability to pay dividends during construction was apparently felt to be an inconvenience, and the Companies

---

[1] According to G. H. Evans (*British Corporation Finance, 1775–1850*) the practice of paying interest to shareholders during the construction period started at the close of the 17th century. It became the usual practice even for ordinary shares until the last quarter of the 18th century. The practice was revived in order to induce railway investment. Evans alleges that the preference share was " the acceptance of the practice of paying interest out of capital . . ." (80). The Act of 1845, however, decreed that no company should declare a dividend which would reduce its capital stock unless the mortgagees and bond creditors gave their consent. In 1847 the House of Commons established a Standing Order for clauses to be inserted in Railway bills prohibiting the payment of any interest or dividend " . . . out of any Capital which they may have been authorised to raise . . . ."

[2] MacDougall v. Jersey Imperial Hotel Co. 144 R. R. Comm. Law and Eq. 251.

[3] 21 Ch. D. 149.

[4] " The value of a building is not merely the sums expended on it, but the interest which those sums would have produced had they been bearing interest during the period of construction "—H. B. Buckley.

[5] Ten years previously (1872) in Bardwell v. Sheffield Waterworks Co. (14 Eq. 517) dividends on preference shares were allowed during construction. As Lindley says, this judgment seems clearly inconsistent with the authorities. (Lindley on Companies, 6th Ed., Vol. 1, page 600). In any case the company was incorporated by special Act of Parliament.

Act, 1907, permitted interest to be paid subject to certain conditions. Section 54 of the 1929 Act now covers the point, and explicitly permits interest payments (maximum at present 6 per cent. p.a.) on share capital where works, buildings, or plant are to be constructed and "cannot be made profitable for a lengthened period." The interest can be treated in the accounts as part of the cost of the asset. The consent of the Board of Trade is required, and the payments must not continue beyond the half year following the half year in which construction is completed.

The period of production of the original equipment possesses a superficial simplicity. Receipts come only from the shareholders or creditors, and to pay money to the shareholders that they themselves have provided, or that the company has borrowed, certainly looks like a return of paid-up capital—the moneys received and paid by the company are so closely related. However, once operation has commenced and receipts begin to flow in from the trade of the company superficial simplicity is lost. Receipts will be derived from the sale of services, or of assets of various kinds, and payments will be made to acquire more assets. In any period there may be a surplus of receipts over payments or vice versa; from this information alone it is impossible to discover whether there has been a profit. Business men, accountants and lawyers, in measuring profits, all take into account changes in the assets, although there is no agreement as to how these changes should be dealt with. Fletcher Moulton's view is not accepted in its entirety by most accountants.

WHAT IS CAPITAL ?

Clearly the ban on the return of capital cannot extend to the *total* value of assets as this would make all dividends illegal! On the other hand, if the ban extends only to the actual sums of money raised from the shareholders, an intervening purchase of assets with the money, their subsequent sale and use of the proceeds for dividends would rob the ban of all effect. The most reasonable interpretation is that assets of a value equivalent to subscribed capital must be retained. A dividend *knowingly* reducing the value of the business when it is already, or, as a result of the dividend, will fall, below the equivalent of the subscribed capital, would under this interpretation be illegal. It would follow that no dividend could be paid out of the profits (measured as the increase in net worth) of one year unless the losses of previous years had been made up. Every dividend would require a valuation of the business with its attendant difficulties, particularly prominent in industrial concerns. A rigid interpretation would make dividend decisions a very serious matter. The Courts realising this have been careful to interfere as little as possible, except in case of bad faith, with business decisions, and judge after judge has emphasised the importance of this attitude.

An interesting example of the valuation problem is to be found in Stringers Case (1869).[1] The Mercantile Trading Co. existed for the purpose of running the blockade during the American Civil War. Its principal asset was a debt due from the Confederate Government, the worth of which depended, of course, on the outcome of the struggle. The parallel between this case and that of an industrial company with highly specialised equipment is obvious; asset values and, therefore, the measurement of profit, depend on a future which can only be guessed. A dividend was declared on a balance sheet including the Government debt, and to pay the dividend the company had to borrow money. Events later proved that the directors had guessed wrongly the outcome of the struggle, though their estimates had been made in good faith.[2] The Vice Chancellor in the lower Court referred to the dividend as "wholly delusive and improper—in effect a return of one-fourth of the capital."

On appeal, however, Sir C. J. Selwyn L. J. stressed the fact that the problem was one of valuation—in this case a mere estimate. To forbid an estimate would have precluded any dividend until all the operations had been concluded:

> "I think the company was justified in doing that which, in truth, is done in almost every business, namely taking the facts as they actually stood, and forming an estimate of their assets as they actually existed, and then drawing a balance so as to ascertain the result in the shape of profit or of loss."
>
> "If we were to lay down as a rule that there must be actually cash in hand, or at the bankers of the company, to the full amount of the dividend declared, we should

---

[1] In *re* Mercantile Trading Co. 4 Ch. App. 475 (Stringers Case).

[2] A number of cases turned on good faith in valuation; see for example, In *re* National Funds Assc. Co. 10 Ch. Div. 118; In *re* Exchange Banking Co. (Flitcrofts case 21 Ch. Div. 519.

be laying down a rule which, in my judgment, would be inconsistent with what I understand and believe to be the custom of all companies of this description, and also inconsistent with mercantile usage, and we should be laying down a rule which would open the door to and encourage a very great amount of litigation, because there are very few dividends indeed which would not be open to more or less question if such a rule as that were laid down."

CAPITAL AND REVENUE ALLOCATIONS

It should be clear that if profit is determined by comparison of valuations, i.e., by measuring changes in net worth, the calculation would involve no question of separate capital and revenue *funds*. If, however, we review the judgments we find that the notion of separate funds runs strongly through many of the decisions. In Hoole v. Gt. Western Rly. Co.[1] the ordinary dividend was not paid in cash "having regard to the large and exceptional extent to which the revenue had necessarily been appropriated in discharge of temporary loans and other liabilities on capital account . . ." In Mills v. Northern Railway of Buenos Ayres Co.[2] the company reported that it had lent to the capital account a certain sum for special expenditure; it was held that the company was justified "in recouping the revenue account at a subsequent time out of capital." Rance's case[3] turned on Articles under which "The expenditure of the company shall be charged to capital or revenue as the directors shall from time to time determine . . ." The general statement that dividends must not be paid out of capital, itself suggests a fund of capital as distinct from other funds.[4] [5]

---

[1] 1867 3 Ch. App. 262.

[2] 1870 5 Ch. App. 621.

[3] 1870 6 Ch. App. 104.

[4] The idea of separate funds of capital and revenue has been used by commentators to reconcile the various judgments. Buckley in particular emphasised the division: "Directly the principle is established that for purposes of dividend capital account and revenue account are to be kept distinct, the difficulty which would otherwise arise from bringing into account appreciation and depreciation of fixed capital disappears, and subject to the difficulty, which must be encountered, of discriminating between revenue charges and capital charges, a safe and intelligible principle is reached." 9th Ed., p. 658, by the author. The editors of the 11th Ed. (1930) are apparently less certain about the matter for they replace the words "are to be kept distinct" by "may be kept distinct." The small difficulty of distinguishing capital and revenue charges remains!

[5] In Wall v. London and Provincial Trust (1920 1 Ch. 46) an attempt was made by Younger J. to solve the problem of dividends by distinguishing the double and single account systems: "If for the purpose of dividend a company like this desires to gain the benefit of an appreciation in capital values it must adopt the single account system and, as a consequence, value its entire assets for the purpose of every dividend distribution." The allusion is to an accounting distinction which is more apparent than real; for the double account system as now practised by public utilities does not differ effectively from the accounting for fixed assets adopted by other industrial companies (using the single account method of presenting final accounts). Neither makes any *real* attempt to value "fixed" assets.

Fixed and Circulating Capital

However awkward the problem of valuation, accounting practice cannot avoid it altogether. It is difficult to envisage any concept of profit which completely ignored the value of the company's possessions. Some companies, to meet the difficulty, expand the term "profit" in the Articles. For example, the directors or the shareholders in general meeting may be empowered to ignore or "provide for" depreciation of plant and equipment before paying dividends. In such a case dividend payments could result in a reduction in the value of the business to a figure less than the paid-up capital. Though within the Articles, such a dividend might still be *ultra vires* as involving a return of capital. To solve the problem of valuation a ready-made cleavage was borrowed by accountants and lawyers from economists—assets were divided into fixed and circulating and these terms are now virtually the centre of accounting valuation practice; market prices are regarded as relevant only to the latter. Thus a distinction, admittedly rough and ready and introduced by economists for purposes of their own, found its way into Court. The Neuchatel Asphalte Co.[1] owned and worked a mining concession. It sold the mineral which it won and the point arose as to whether any part of the proceeds was capital and hence must not be returned to the shareholders. The directors were not bound by the articles to set aside moneys for renewing or replacing the lease, but at the same time the Articles provided for dividends out of *net* profits! This case is obscured by the fact that it had not been proved that the assets were worth less than at the time of forming the company, and Stirling J.'s judgment was based on this. But in the Court of Appeal, counsel for defendants went further and argued the case on the supposition that there *had* been a loss of capital.

> "Can it be contended that before a railway company can pay a dividend it must revalue its undertaking? Suppose, owing to a fall in the price of iron, a railway is not worth nearly so much as it was at first, can it be urged that the company can declare no dividend until it has laid by enough to make up the difference? The Appellant forgets the distinction drawn by economists, which is a very substantial one, between fixed capital, the money expended in purchasing which is sunk once

---

[1] Lee v. Neuchatel Asphalte Co. 1889 41 Ch. D. 1.

> for all, and circulating capital, capital circulating like stock-in-trade, which in the ordinary course of business is parted with and replaced by other."

Lindley L.J. considered this point and went on to examine the law preventing the repayment of capital:

> ". . . the capital expended in acquiring the property may be regarded as sunk and gone, and if the company retains assets sufficient to pay its debts, it appears to me that there is nothing whatever in the Act to prevent any excess of money obtained by working the property over the cost of working it, from being divided amongst the shareholders, and this in my opinion is true although some portion of the property itself is sold, and in some sense the capital is thereby diminished."

The position is developed further in Verner v. General and Commercial Investment Trust[1] in spite of the preoccupation of Stirling J. in the lower Court with the meaning and purpose of the 1877 Act which certainly seems to lose much of its significance if dividends can be paid in spite of a loss of capital. In the Appeal Court there was an interesting passage between counsel and Kay L.J., who remarked:

> "In partnership deeds it is common to provide for a valuation of the capital at the end of each year in order to ascertain profits."

Counsel replied:

> "Yes, that must be done where the bulk of the capital consists of articles intended to be sold—thus, in a draper's business, there is no way of ascertaining the profits of a year but valuing the stock at the beginning and end of the year, and bringing the difference into account along with the cash transactions of the year. But the case is quite different where the capital is sunk in something permanent—as, for instance, a tramway—by the use of which profits are to be made."

Lord Lindley in judgment said:

> "It is obvious that dividends cannot be paid out of capital which is lost; they can only be paid out of money which exists and can be divided. Moreover, when it is said, and said truly, that dividends are not to be paid

---

[1] 1894 2 Ch. 239. An investment trust whose investments had fallen in value and some of which were worthless. A stockholder tried to prevent the payment of a dividend out of interest and dividends received by the company until the fall in capital value was made up. The motion was unsuccessful.

> out of capital, the word 'capital' means the money subscribed pursuant to the memorandum of association, or what is represented by that money."
>
> "Perhaps the shortest way of expressing the distinction I am endeavouring to explain is to say that fixed capital may be sunk and lost, and yet, that the excess of current receipts over current payments may be divided, but that floating or circulating capital must be kept up, as otherwise it will enter into and form part of such excess, in which case to divide such excess without deducting the capital which forms part of it will be contrary to law."

Mr. R. F. Fowler, in examining some of these decisions, suggests that:

> "The distinction between fixed and circulating capital was intended to reconcile the requirement in the statute that dividends must not be paid out of capital, with a desire not to interfere 'unduly' with business practice, since it was obvious that it was impossible to demand that firms should not pay dividends if the value of capital assets was not equal to the nominal capital."[1]

An excellent example of the lack of clarity resulting from these decisions is found in Bond v. Barrow Hæmatite Steel Co.[2] A smelting company acquired leases of mines in order to avoid buying ore. The mines were flooded and the leases were as a result surrendered, the blast furnaces being pulled down and certain associated cottages sold. The preference shareholders wanted their dividend. The defendant's counsel claimed that the mines and certain buildings were held for the supply of raw materials: "Mining was not our main business, but the mines were merely held for the supply of iron ore for our main business. They were, therefore, stock-in-trade and the blast furnaces and cottages were merely ancillary." The Court accepted, as a result, the view that these leases were circulating capital.

In spite of the obscurity which surrounds the problem it seems likely that at the back of the distinction is the idea of the tree and the fruit. Fruit is income, the tree is capital; if you sell the fruit and pay a dividend you are not returning the money which the shareholders paid in to buy the trees. If the trees happened to be dying that does not alter the character of the fruit, it is still income and creditors who lend money to the company must know that fruit trees are liable to die. The tree in Lee's case was a mining concession and in Verner's case, stocks and shares. The tree is fixed capital, but the money spent each year for picking the fruit is circulating capital. If each year the wages were paid from the amounts subscribed by the shareholders and the whole price of the fruit paid out as dividend this would be treated as a return of capital. Yet both the labour and the tree were bought with capital. The distinction seems to be that the return of capital in one case is slightly more obvious than in the other. The distinction has in fact been condemned by Lord Halsbury, in dissociating himself from a Court of Appeal discussion of dividends :[1]

---

[1] *The Depreciation of Capital*, R. F. Fowler, p. 122.

[2] 1902 1 Ch. 353. This case is a good example of the confusion that arises from the two tests used by accountants in distinguishing fixed and circulating assets. One depends on the rate of turnover of the asset and the other on the "function" of the asset. The tests may give conflicting answers. I have discussed this more fully in a series of articles in *The Accountant*, Vol. xcix, p. 13 ("Nature and Measurement of Income").

> " I doubt very much whether such questions can ever be treated in the abstract at all. The mode and manner in which a business is carried on, and what is usual or the reverse, may have a considerable influence in determining the question what may be treated as profits and what as capital. Even the distinction between fixed and floating capital, which may be appropriate enough in an abstract treatise like Adam Smith's *Wealth of Nations*, may with reference to a concrete case be quite inappropriate."

Halsbury's views were repeated by Scrutton L. J,[2] who was apparently dissatisfied with Farwell's judgment in Bond v. Barrow Hæmatite Steel Co.

INCREASES IN THE VALUE OF FIXED OR CAPITAL ASSETS

While the " fixed and circulating asset " distinction was fighting its way to recognition, cases arose in which dividends based on *rises* in the value of " fixed " assets were challenged. If fixed capital could be lost without restricting dividends it was argued that a separation of funds was implied and that by the same token a profit on a fixed asset could not be distributed as such profit was part of the capital.[1] Such an interpretation of the law would have been symmetrical but inconvenient.

---

[1] Dovey v. Cory 1901 A.C. 477.

[2] Chamberlin v. Ammonia Soda Co., 1918, 1 Ch. 266. " I am startled to find that in the decision of Farwell J. in Bond v. Barrow Hæmatite Steel Co. he has extended Lindley L.J.'s proposition to wear and tear of fixed capital, which is not parted with at all, and has treated the wear and tear of buildings as circulating capital which must be made good. Such a meaning of the term ' circulating capital ' is certainly not the sense in which it was used by the economists from whom the definition was taken. Mr. Mill's definition of circulating capital was capital which fulfils the whole of its office in the production in which it is engaged by a single use ; and certainly Mr. Mill would have been astonished to hear that a building which deteriorates by wear and tear was circulating capital within his definition."

In the case of Bolton v. Natal Land and Colonisation Co.[2] a company had offset the effect on the profit and loss account of a bad debt by writing up the book value of its land. A few years later a profit was shown on the revenue account but a shareholder claimed that the land had fallen in value. It was held that there was no obligation to provide for this. It would thus appear that increases in value in one year can be brought into account and depreciation in other years ignored. The view that the distribution of profit on a sale of part of the undertaking itself is not a return of capital was successfully maintained in Lubbock v. British Bank of South America.[3] Chitty J. justified this by distinguishing ordinary trading companies from those which resemble the Neuchatel Asphalte Co.:

> "The sale being an authorised sale, it is immaterial what is the thing sold. I put during the argument a humble illustration. A man's business is to make boots and shoes. He has £10,000 which he takes into that business as his capital. He makes boots and shoes and spends the whole of his £10,000 in doing it, and he sells and gets back from his customers a certain sum on the sale. He compares then, assuming he has sold all, what he has got back with his expenditure in producing the boots and shoes, and putting them on the market, and if he finds he has his £10,000 (I am treating it apart from any question of debts outstanding, supposing it is a good solid sale) then his capital is intact, and the rest, if there is a rest remaining in his hands, is profit. On the other hand, if he has only £9,000 his capital is not intact, and he has lost. It is exactly the same principle that has to be applied to a trading company under the Companies Act, and the capital that has to be regarded for the purpose of the Act of Parliament is the capital according to the Act and not the things, whether houses,

---

[1] See for example Lopes L. J. in the Neuchatel Asphalte Co. case: "The capital and the revenue accounts appear to me to be distinct and separate accounts, and, for the purpose of determining profits, accretions to and diminutions of the capital are to be disregarded.

[2] 1892 2 Ch. 124.

[3] 1892 2 Ch. 198.

> goods, boots and shoes, or hats, or whatever it may be for the time being representing the capital, in the sense of being things in which the capital has been laid out. Where the company is formed to work a wasting property, such as a mine or a patent, different considerations may apply, as was decided in Lee v. Neuchatel Asphalte Co. I am not dealing with any such special case."

Support for the view that a "capital appreciation" can be divided "if duly realised by sale or getting in of some portion of such assets" is found in Foster v. New Trinidad Lake Asphalte Co.,[1] but Byrne J. emphasised his view that the appreciation on one asset must not be looked at "without reference to the result of the whole accounts fairly taken." In the Ammonia Soda case referred to earlier, it was held that there is nothing to prevent a company from setting off an appreciation in the value of its capital assets against losses in its revenue account.[2]

PRIOR LOSSES

A rigid interpretation of the "increased-net-worth concept" of income for one year would involve comparison of value at the end with value at the beginning of that year. A different profit figure might be shown by conventional accounting technique, but however the profit of the given year be arrived at, the question arises whether a dividend can be paid if the concern has made losses in prior years which have not been cancelled by a capital reduction. The answer is complicated by the fixed and circulating capital distinction and losses, if they can be traced to a fall in the value of the former, apparently need not be recouped. In Dent v. The London Tramways Co.[3] a preference dividend was allowed in spite of the fact that previous years had not been charged with depreciation on the undertaking.[4]

---

[1] 1901 1 Ch. 208.

[2] Peterson J.'s judgment is interesting for, among other things, its comments on the loose expression often given to accounting principles relating to the "realisation" of profits and the valuation of fixed assets.

[3] 16 Ch. D. 344.

[4] The particular Articles in this case provided that dividends were to be paid only out of profits and that sums were to be set aside annually to cover maintenance. An ordinary stockholder sued to restrain the payment of an ordinary dividend on the ground that depreciation had not been adequately provided for. The injunction was granted (Davison v. Gillies 16 Ch. D. 347) it being held that on the Articles dividends were payable out of *net* profits in the calculation of which depreciation must be taken into account. Dent's case followed and concerned a preference dividend payable out of the profits of the particular year only. Jessel M. R. agreed that "Profits for the year, of course, mean the surplus in receipts, after paying expenses and restoring the capital to the position it was in on the 1st January in that year

The line of decisions from Lee's case onwards confirms the view that prior losses of fixed capital need not be made good unless, of course, the Articles require it. But suppose there have been prior losses of circulating capital—would the company in succeeding years have to make good that loss before paying a dividend? The Court of Appeal discussion of this question in *re* National Bank of Wales[1] would suggest a negative answer. In this case the current year showed an excess of receipts over payments, but in previous years there had been bad debts.

Lindley M. R.:

> "If the returns do not exceed the money spent in procuring them (whether such money be called circulating capital or by any other name) there can be no profits; and no ingenious process of book-keeping can alter the fact. It is not denied that in this case the annual receipts did exceed the annual outgoings and, the dividends having been paid out of the excess, the allegation that they were paid out of capital is not accurate."[2]

CONCLUSION

Messrs. Weiner and Bonbright have expressed the opinion that ". . . the English decisions are a marvel of inconsistency and cannot be said to accord with any one theory of profits."[3] Obscurity will certainly remain so long as dividends depend on any distinction between (*a*) fixed and circulating capital, (*b*) capital and revenue funds, (*c*) capital lost and capital sold.

The present writer believes that the difficulties are inherent in the ban on the return of capital. There are, of course, some companies, such as investment trusts and simple trading businesses, of which the worth at any moment can be calculated, at least approximately, by the separate valuation of assets. In the case of most industrial companies, however, it is not possible to calculate the value of the business in this way. The *separate* values of the assets to alternative users differ from their values to the company owning them. Current accounting technique by which assets are valued separately for balance sheet purposes is arbitrary and obscure[1] and cannot be assumed to provide much evidence of the present value of the business concerned. The present value of a business is dependent on expectations of the future receipts and future outgoings of that business. It is also dependent on the divisibility of rights ; a higher price for the business of a large industrial company can usually be obtained by splitting the total capital into transferable shares than by attempting to sell it all to one investor.[2] The money value of an undertaking is the market price of its capital on the assumption that this capital has been divided into the optimum number and classes of shares. The market price indicates the level at which the whole of the investment can be absorbed and it follows that the creditors of the company know that the assets, which form their security, are regarded by the investment market as covering the amount of the liabilities of the company plus the market price of the shares multiplied by their number. Once the share value falls below par there is evidence that the investment market regards the current value of the business as below the original subscribed capital. The market which absorbed the investment at par at some time in the past will no longer do so.

---

[1] 1899 2 Ch. 629.

[2] This tends to confirm the thesis put forward by Mr. Edward Westby-Nunn who suggests that the Bond case was wrongly decided not because the leases were in fact fixed capital but because they were circulating capital which had been *lost*. According to his reading of the judgment of Lord Lindley in Verner's case, importance should be attached to the statement that circulating capital must be kept up "as otherwise it will enter into and form part of such excess", i.e., the excess of receipts over payments out of which dividends are paid. He goes on to suggest that it is the *sale* of assets rather than the *loss* of assets that causes the difficulty (*Law Relating to Profits Available for Dividends*, Gee and Co).

[3] "Theory of Anglo-American Dividend Law," *1930 Columbia Law Review*, p. 338 (Footnote).

Market price is evidence that, in the light of the knowledge possessed by the investment market, the business is worth a given sum. These market prices assist individual holders of shares to determine whether they have made losses or gains on their investments ; they also provide an objective measurement of the capital of the whole concern. If present market value is already below the amount of subscribed capital or would, by reason of a dividend payment fall below that amount, a dividend in such conditions could be regarded as "reducing capital", since the market has ceased, or will cease, to regard the rights to the assets less the liabilities as worth absorbing at an amount equal to the capital originally paid in. This interpretation of the ban on the return of capital would be logical on the assumption that "capital" is to be interpreted as a sum of money or money's worth equal to the original money subscribed, but it would nevertheless be impracticable for several reasons. Firstly, the market for many shares is very imperfect and is subject to special restrictions in the case of private companies. Secondly, detailed knowledge about a company's past and present position is usually limited to a small group; the main body of shareholders remaining ignorant of much important information. As a result the conditions in which creditors become *directly* interested in the market value of the business (on which their security depends) are just those conditions which are often carefully kept from the investment market; they represent a situation in which creditors find it difficult to get their money. The price of the shares will often change suddenly on the appointment of a liquidator or receiver, because this provides the market with new knowledge about the position of the business. It follows that from the creditors' point of view, shares might be standing at par but that this value would be of little help to them because an attempt by them to obtain payment would indicate a condition in which the market would revise its opinion.

---

[1] See Ronald S. Edwards, articles cited, p. 183, n. 2.

[2] Divisibility can work both ways ; it can either increase the total amount that would be paid for a business or decrease it. But it seems likely that up to a point divisibility of the capital of a large company will increase the price obtained for it. A further limit to the profitability of division is imposed by rising costs of administration.

It is, therefore, unlikely that anybody would support the view that dividends should be banned immediately share prices fall below par on the ground that this is evidence of a loss of capital. The satisfactoriness of share prices as evidence depends on perfection of knowledge to a degree which does not exist.

The Courts, therefore, have been in a very difficult position, and the resulting obscurity is not to be wondered at. A logical interpretation of the ban on the return of capital would involve procedures which are not practicable.[1] This being so, judges have leaned towards too little interference rather than too much, and companies are, as a result, left with a considerable amount of freedom to return capital to the shareholders. That the system of limited liability works is due to three factors. Firstly, directors are always subject to the law of fraud, hence a dividend deliberately in fraud of the creditors is unlikely. Secondly, the civil judgments are sufficiently obscure to deter most directors from incautious behaviour. Thirdly, directors and the accountants who advise them often have more to gain from building up reserves to ensure the company a long life, than from allowing resources to be used for high dividends. Conservative dividend policy and financial probity are regarded as almost indistinguishable.

---

[1] Individual companies can, of course, impose upon themselves such complicated regulations. As Lord Lindley said in the Verner case: "A company may be formed upon the principle that no dividends shall be declared unless the capital is kept undiminished or a company may contract with its creditors to keep its capital or assets up to a given value. But in the absence of some special article or contract, there is no law to this effect . . . ."

Such an arrangement may be unsatisfactory but it is difficult to think of alternatives within the general framework of the existing company law. There is one which suggests itself and which would leave companies to dispose of all their resources as they please regardless of profits or losses. Shareholders are liable to pay to the company any uncalled capital existing in respect of their holdings. All dividend payments might be made to increase the *uncalled* liability of the shareholders up to a maximum of the amount originally subscribed. Thus if a company had issued 100 £1 shares to *A* and had called 10s. per share, *A* would at present be liable for a further £50. Suppose the company while trading paid dividends to *A* of £10, his contingent liability would, if this scheme were adopted, rise to £60; further dividends would increase the contingent liability to a maximum of £100. In such conditions the company could be free to return any or all of its resources to its shareholders, and in the event of liquidation, shareholders would be required to find the difference between the liabilities of the company and the value of the assets—with a maximum equal to the uncalled capital.

However, such a change would almost certainly prove unpopular with shareholders and is probably unnecessary for the protection of creditors. The absence of any public outcry against the law relating to dividends suggests that, whatever its obscurity, traders who make bad debts do not attribute them primarily to this cause.

The Assumptions of Linear Regression

By R. G. D. Allen

I

For a continuous frequency distribution of two continuous variables, the *regression curve* of y on x is defined by the relation of the (arithmetic) mean values of y in x-arrays to the values of x defining the arrays. The curve has the following important property. If we compute the deviation in the direction of the Oy axis between each point of the distribution and a curve in the Oxy plane, then the mean-square deviation over the whole distribution is least when the curve is the regression curve of y on x. The regression curve of x on y can be considered in the same way. If the distribution is normal, with x and y measured from their means with standard deviations σ_x and σ_y and with correlation co-efficient r_{xy}, the regression curves are linear, $y = r_{xy}\frac{\sigma_y}{\sigma_x}x$ and $x = r_{xy}\frac{\sigma_x}{\sigma_y}y$, and the minimised mean-square deviations are respectively $\sigma_y^2\ (1 - r^2_{xy})$ in the Oy direction and $\sigma_x^2\ (1 - r^2_{xy})$ in the Ox direction.[1]

When the frequency distribution is not normal and the regressions are non-linear, linear approximations to the curved regressions can be obtained once the latter are found as loci of means of arrays. Rather different linear approximations are found by using the "least squares" property. The regression curve of y on x is the curve from which the mean-square deviation (in the Oy direction) of the distribution is least. Limiting the "field" to straight lines, it is found that the line with this "least squares" property is

---

[1] Regression curves can be defined by statistical averages other than the arithmetic mean. The median regression curve, of y on x, for example, has the characteristic property that the mean deviation, taken in the Oy direction with sign ignored, of points of the frequency distribution from a curve in the Oxy plane is least when the curve is the median regression curve. Further, if the distribution of x and y, both measured on logarithmic scales, is normal, then the arithmetic mean regression of $\log y$ on $\log x$ is linear, i.e. the geometric mean regression of y on x is of the form $y = ax^b$ where a and b are constants. This distribution can be called a double logarithmic-normal distribution, an extension of the familiar logarithmic-normal distribution introduced by Gibrat in *Les Inégalités Economiques* (1931). It is a distribution to which geometric mean regressions, of markedly curvilinear form, apply.

$$y = r_{xy}\frac{\sigma_y}{\sigma_x}x \qquad (1)$$

where x and y are taken from their means and σ_x, σ_y and r_{xy} have the usual significance. This is the actual regression curve for a normal distribution but, in general, it is only some kind of approximation to the correct regression curve. The regression line of x on y

$$x = r_{xy}\frac{\sigma_x}{\sigma_y}y \qquad (2)$$

is to be interpreted in a similar way. The approximate linear regressions (1) and (2) are clearly of great practical convenience. They can be determined even when a sample of observations is not large enough to give the correct regression curves as loci of means of arrays.

The use of (1) and (2) remains valid as long as we retain the idea of regression curves as loci of means of arrays. It has become increasingly the practice, however, to use the results in a very different connection. A sample of observations gives a frequency distribution of two variables subject to random deviations or "errors" of one kind or another. It is required to find the "best" linear relation connecting the variables, the criterion of "best" being more or less understood. We may use, for example, market data of prices and consumption to give an estimate of the demand curve for sugar as the best linear relation between these variables, or budget data to give a linear estimate of the dependence of sugar expenditure on total family expenditure. The lines given by (1) and (2), which may be termed the *elementary regression lines*, are taken by most investigators as fixing limits between which the best line required must lie. It is often maintained, further, that the best line is such that the mean-square deviation of the observations, taken *perpendicularly* to the line, is least. This line, which passes through the point of intersection of and lies in the acute angle between the elementary regressions, is variously called the *orthogonal regression line*, the mutual regression line or (simply) the line of best fit.

These assertions appear unjustified. The new problem has nothing to do with the loci of means of arrays and cannot take over and extend the "least squares" property of these loci without some consideration of the change of meaning involved. We must approach the new problem afresh, discarding the results previously obtained as being, at least, of doubtful application. The following development is intended to indicate one possible way of approaching the new problem.[1]

II

It is assumed that two variables x and y are related by a linear functional relation,[2] which is disturbed, in the given observations, by random deviations satisfying the two conditions :

(1) The mean value of the deviations in either variable, taken over all observations, is zero.

(2) There is no correlation, in the observations, between the true values and the deviations of either variable.

The problem is to derive the true linear relation between x and y from the scatter of (x, y) observations.

Write the observed values of the variables

$$x = \xi + u \text{ and } y = \eta + v$$

where ξ and η are the true values and u and v the deviations. By assumption (1), all values can be taken from their observed means. Let the true relation be $\eta = m\xi$, where m is a co-efficient to be found.

The means, standard deviations and correlation coefficients of the following analysis all refer to the given observations. Assumption (2) and the relation $\eta = m\xi$ give

$$\text{Mean } (\xi u) = \text{Mean } (\eta v) = \text{Mean } (\xi v) = \text{Mean } (\eta u) = 0 \quad (3)$$

Write $$\lambda_u = \frac{\sigma_u}{\sigma_x} \text{ and } \lambda_v = \frac{\sigma_v}{\sigma_y}$$

as positive fractions which can be termed the *intensities* of the deviations in x and y respectively. Making use of (3),

---

[1] The development is based on a method, used by Professor Bowley and others, of obtaining the elementary regressions independently of assumptions of "least squares" or of normality of distributions. For studies on orthogonal and other regression lines, see Pearson, "On lines and planes of closest fit . . ." (*Phil. Mag.* 1901) and a series of papers (*Phil. Mag.* 1925–7) by Uhler, Glauert, Whipple and Rhodes. Schultz, in *Statistical Laws of Demand and Supply* (1928), also quotes a number of earlier papers by Adcock and Kummell in the *Analyst* (1877–9). Finally, the present results can be compared with those of Frisch, *Statistical Confluence Analysis* (1934), pp. 47–70. It is not possible, in the space of this short paper, to appraise or criticise this earlier work ; a general expression of indebtedness must suffice.

[2] The assumption is wider than appears at first sight. Taking the variables on natural or on logarithmic scales, we can express in linear form any of the four relations

$$y = a + bx \; ; \; y = ae^{bx} \; ; \; y = a + b \log x \; ; \; y = ax^b$$

More generally, our problem includes any relation which can be reduced to linear form by a suitable transformation.

$$\begin{aligned}\text{Mean}(x^2) &= \text{Mean}(\xi^2+2\xi u+u^2)=\text{Mean}(\xi^2)+\text{Mean}(u^2)\\ \text{Mean}(y^2) &= \text{Mean}(\eta^2+2\eta v+v^2)=\text{Mean}(\eta^2)+\text{Mean}(v^2)\\ &= m^2\text{Mean}(\xi^2)+\text{Mean}(v^2)\\ \text{Mean}(xy) &= \text{Mean}(\xi\eta+\xi v+\eta u+uv)=\text{Mean}(\xi\eta)\\ &\quad+\text{Mean}(uv)=m\text{Mean}(\xi^2)+\text{Mean}(uv)\end{aligned}$$

So

$$\left.\begin{aligned}\sigma_x^2&=\sigma_\xi^2+\sigma_u^2\\ \sigma_y^2&=m^2\sigma_\xi^2+\sigma_v^2\\ r_{xy}\sigma_x\sigma_y&=m\sigma_\xi^2+r_{uv}\sigma_u\sigma_v\end{aligned}\right\} \qquad (4)$$

Hence

$$m=\pm\sqrt{\frac{1-\lambda_v^2}{1-\lambda_u^2}}\,\frac{\sigma_y}{\sigma_x} \qquad (5)$$

and

$$\left.\begin{aligned}r_{xy}&=m\frac{\sigma_x}{\sigma_y}(1-\lambda_u^2)+r_{uv}\lambda_u\lambda_v\\ &=\pm\sqrt{(1-\lambda_u^2)(1-\lambda_v^2)}+r_{uv}\lambda_u\lambda_v\end{aligned}\right\} \qquad (6)$$

The relations (5) and (6) are both independent of the scales of measurement adopted for the variables x and y.

The interpretation of (5) and (6) is clear. The true relation between the variables can only be deduced from the observations if we know the configuration of the deviations in the variables, as characterised by the two intensities λ_u and λ_v and the correlation r_{uv}. In general, we know only one thing—that the deviations must be such that the observed correlation r_{xy} is obtained. We have the relation (6) between the three "unknowns" λ_u, λ_v and r_{uv}. Our only course, therefore, is to assume values for two of the unknowns (using general impressions about the nature of the deviations), to determine the third from (6) and then find m from (5). It would seem simplest, in practice, to assume values for λ_u and λ_v, in which case m is given without using (6). The difficulty here is that we do not know, without using (6), whether our assumed values are consistent; they may be such that a value of r_{uv} numerically greater than one is needed to satisfy (6). A better practice seems to be to assume values of the ratio $\lambda_u : \lambda_v$ and of r_{uv}. For example, our vague knowledge of the deviations may suggest $\lambda_u = 2\lambda_v$ and $r_{uv} = \frac{1}{2}$ as convenient assumptions. The values of λ_u and λ_v are then given by (6) and the value of m required by (5).

It appears from (6) that m is *usually* of the sign of r_{xy}, e.g. if r_{uv} is small. But this is by no means necessarily the case. If the deviations in x and y are appreciable and negatively correlated, (6) shows that a positive m can correspond to a negative observed correlation r_{xy}. The (perfect) positive correlation between the true values of the variables is so disturbed by the deviations as to give a negative correlation between the observed values.

III

Some special cases can be considered in more detail:
Case (1) $\lambda_u = 0$. *No deviations in the observed values of x.* From (5) and (6) we obtain quite easily

$$m = r_{xy}\frac{\sigma_y}{\sigma_x} \quad \text{and} \quad \sigma_v = \sigma_y\sqrt{1 - r^2_{xy}}$$

In this case, the value of m is the elementary regression co-efficient of y on x and the true linear relation between the variables is the elementary regression line (1). Hence, if the deviations can be assumed to appear only in y (with zero mean and uncorrelated with the true values of y), then the elementary regression line of y on x, as found by the least squares method, provides the true relation. An exactly similar result holds if the deviations appear only in x.[1]

Case (2) $r_{uv} = 0$. *No correlation between deviations in x and y.* Here the condition (6) reduces to

$$(1 - \lambda^2_u)\ (1 - \lambda^2_v) = r^2_{xy}$$

and, from (5), we can write m in either of the forms

$$m = \frac{r_{xy}}{1 - \lambda^2_u}\ \frac{\sigma_y}{\sigma_x} = \frac{1 - \lambda^2_v}{r_{xy}}\ \frac{\sigma_y}{\sigma_x}$$

There is a simple relation between the deviation intensities producing a given amount of correlation in the observations. If we know (or assume) the value of λ_u, then the value of λ_v is given by

$$\lambda^2_v = 1 - \frac{r^2_{xy}}{1 - \lambda^2_u}$$

The deviations in x increase in importance as those in y decrease, λ_u increasing from zero to its maximum value $\sqrt{1 - r^2_{xy}}$ as λ_v decreases from its maximum value $\sqrt{1 - r^2_{xy}}$ to zero. Further, as this happens, the value of m varies

---

[1] The elementary regression line (e.g.) of y on x provides the true relation under other assumptions. This is so if

$$r_{uv}\frac{\sigma_v}{\sigma_u} = r_{xy}\frac{\sigma_y}{\sigma_x}$$

i.e. if the deviations alone give the same regression co-efficient as the full observed values of the variables.

continuously (increasing or decreasing according as r_{xy} is positive or negative) from $r_{xy}\frac{\sigma_y}{\sigma_x}$ to $\frac{1}{r_{xy}}\frac{\sigma_y}{\sigma_x}$, i.e. from one elementary regression co-efficient to the other.

If we assume that the deviations are uncorrelated, therefore, the line representing the true relation between the variables lies within the acute angle between the elementary regressions, being near the elementary regression line of y on x if the x deviations are relatively small and near the elementary regression line of x on y in the converse case. The elementary regression lines form a range within which the true line must lie and what we know, or care to assume, about the relative extent of the x and y deviations enables us to locate the true line more or less accurately within this range.

Case (3) $r_{uv} = \pm 1$. *Perfect correlation between deviations in x and y.*

Suppose that the deviations in x and y are always proportional. Then $\frac{v}{u}$ is constant and equal (say) to $\tan\beta$, where β fixes the "direction" of the perfectly correlated and proportional deviations. So

$$\sigma_v = \sigma_u \tan\beta \quad \text{and} \quad \lambda_v = \lambda_u \tan\beta \frac{\sigma_x}{\sigma_y}$$

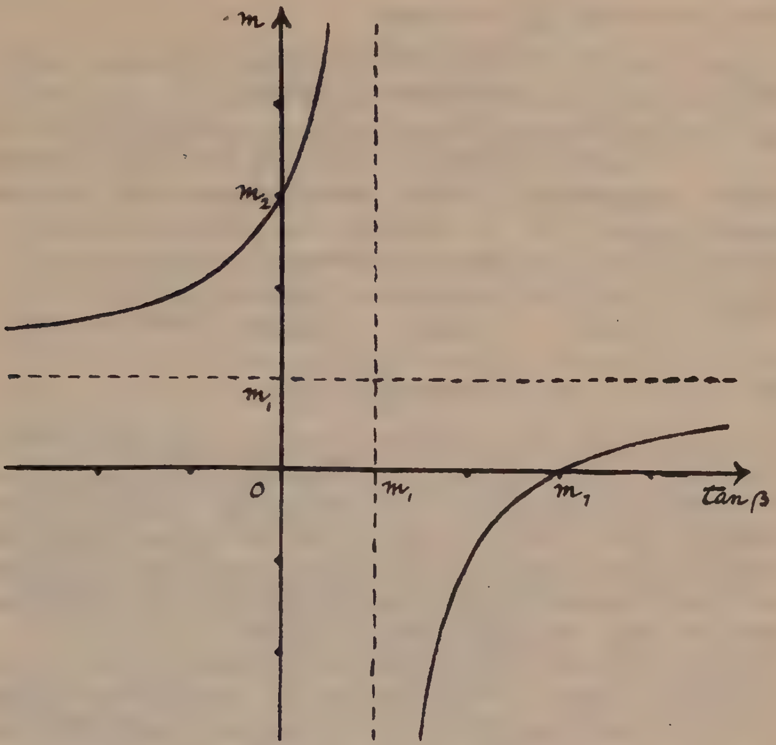
and the value of m in (5), using (6), reduces to

$$m = \frac{r_{xy}\sigma_x \sin\beta - \sigma_y \cos\beta}{\sigma_x \sin\beta - r_{xy}\sigma_y \cos\beta} \frac{\sigma_y}{\sigma_x}$$

Hence, given the observations, the value of m depends only on $\tan\beta$ and the position of the true line is determined if we know or assume the direction of the deviations in this special case.

If $m_1 = r_{xy}\frac{\sigma_y}{\sigma_x}$ and $m_2 = \frac{1}{r_{xy}}\frac{\sigma_y}{\sigma_x}$ denote the elementary regression co-efficients, we can write $m = m_1 \frac{m_2 - \tan\beta}{m_1 - \tan\beta}$

To fix ideas, suppose $r_{xy} > 0$ so that $m_2 > m_1 > 0$. Taking $\tan\beta$ along the horizontal axis and m along the vertical axis, the dependence of m on $\tan\beta$ is shown by the curve, a rectangular hyperbola, of the appended diagram. For inversely correlated deviations, $r_{uv} = -1$ and $\tan\beta < 0$, the



value of m increases from m_1 to m_2 as $\tan\beta$ increases from infinitely large negative values to zero, i.e. as the deviations in x become larger relatively to those in y. This is a result very similar to that of Case (2). For directly correlated deviations, $r_{uv}=+1$ and $\tan\beta>0$, the value of m must lie outside the range (m_1, m_2) and may even be negative, opposed in sign to the observed correlation co-efficient r_{xy}.

In the case of perfectly correlated deviations considered here, the true line lies between the acute angle between the elementary regression lines only if the deviations are correlated in the sense inverse to the observed correlation between the variables. In other circumstances the true line lies outside this acute angle. The elementary regression lines do not provide sure guides in the location of the true line; it all depends on the direction in which the deviations are correlated.

Case (4)
$$\frac{r_{uv}\sigma_u\sigma_v}{\sigma_u^2-\sigma_v^2}=\frac{r_{xy}\sigma_x\sigma_y}{\sigma_x^2-\sigma_y^2}$$

From the results (4), we have

$$\sigma_x^2 - \sigma_y^2 = (1 - m^2)\sigma_\xi^2 + (\sigma_u^2 - \sigma_v^2)$$

and

$$r_{xy}\sigma_x\sigma_y = m\sigma_\xi^2 + r_{uv}\sigma_u\sigma_v$$

So

$$\frac{m}{1 - m^2} = \frac{r_{xy}\sigma_x\sigma_y - r_{uv}\sigma_u\sigma_v}{(\sigma_x^2 - \sigma_y^2) - (\sigma_u^2 - \sigma_v^2)} = \frac{r_{xy}\sigma_x\sigma_y}{\sigma_x^2 - \sigma_y^2}$$

in the case assumed. Write $m = -\cot a$ so that the true line is

$$x \cos a + y \sin a = 0$$

Then

$$\frac{m}{1 - m^2} = -\frac{\cot a}{1 - \cot^2 a} = \frac{\tan a}{1 - \tan^2 a} = \tfrac{1}{2}\tan 2a$$

So

$$\tan 2a = \frac{2\, r_{xy}\sigma_x\sigma_y}{\sigma_x^2 - \sigma_y^2}$$

But this is just the condition that the true line, written as above, is provided by the orthogonal regression line, or the "line of best fit". The orthogonal regression line, therefore, gives the true line if the deviations satisfy the relation set out here, i.e. if they are such that the same orthogonal regression line is determined from the deviations alone as from the full observed values.[1]

The present case differs from the previous ones in a very important respect. The form of our results here shows that the determination of the orthogonal regression line is not independent of the choice of units for the measurement of the two variables. If the scale of x or y is changed, then an entirely different orthogonal regression line is obtained. Suppose that the units of x and y are given, as when the variables are measured in the same natural units. Then certain particular configurations of deviations (satisfying the above condition) are such that the orthogonal regression line is the true line. But this does not provide a means of avoiding an examination of the nature of deviations. Conversely, if the configuration of deviations is given, then the units of the variables can always be manipulated so that the true line is provided by the orthogonal regression line. There is, however, no way of fixing the appropriate units in any practical case.

---

[1] Two particular cases can be noticed. If the deviations are uncorrelated, the orthogonal regression line is the true line if $\sigma_u = \sigma_v$, i.e. if the deviations are of equal dispersion on the scales adopted for the variables. If the deviations are perfectly correlated and proportional, the condition is easily seen to imply that $\beta = \tan^{-1}\frac{v}{\text{[illegible]}}$ is equal to a, i.e. the orthogonal regression line is the true line if the deviations are in a direction perpendicular to the true line.

IV

The following results are obtained. A linear relation between two variables is disturbed, in given observed data, by deviations with zero means and uncorrelated with the true values of the respective variables. Then:

(1) The determination of the true linear relation from the observations depends on the configuration of the deviations and the latter must be such that the amount of correlation observed between the variables is obtained. (See results (5) and (6).)

(2) If deviations appear in only one variable, then one of the elementary regression lines gives the true relation.

(3) If deviations appear in both variables but are uncorrelated, then the true relation corresponds to a line lying in the acute angle between the elementary regression lines. A more exact location can only be obtained from knowledge of the relative magnitude of the deviations in the two variables.

(4) If the variables show deviations which are perfectly correlated and proportional, then the elementary regression lines no longer necessarily limit the location of the true line. The latter lies within the acute or the obtuse angle between the former according as the correlation between the deviations is in the opposite or the same sense as that between the observed variables. Further, as the example below shows, the true line is not necessarily limited in position by the elementary regression lines in any case where there is some correlation between the deviations in the variables.

(5) The orthogonal regression line, or "line of best fit", is not invariant as to scales and should not be used as an alternative to an examination of the configuration of deviations in the data.

(6) In using the results (5) and (6), we must know values of two of the parameters (λ_u, λ_v and r_{uv}) of the configuration of deviations. In practice, therefore, the results are rather negative. All we can do is to select, in the light of whatever is known about the deviations in the data, a value for $\lambda_u : \lambda_v$ (the relative magnitude of the intensities of the deviations) and a value for r_{uv} (the extent of the correlation between the deviations).

V

It is maintained that the conclusions of the growing number of econometric studies making use of regression analysis cannot be accepted without some examination of the basic data and of the appropriateness of the regression formula used. A simple example illustrates.

In *Statistical Laws of Demand and Supply* (1928), Professor Schultz has studied the demand for sugar in the light of market data on prices and consumption, U.S.A., 1890–1914. One of the methods he adopts is essentially the following. In order to eliminate the effect of temporal changes (as far as they are systematic), we take the consumption of sugar and express this as a ratio (x) of its trend value. Similarly, the price of sugar is expressed as a ratio (y) of its trend value. It is assumed that the demand law for sugar is fixed over time and is linear in x and y, and further that the observations in the 25 years considered show random deviations of the kind described above. Deviations must arise if only for the reason that x is obtained from the total yearly consumption and y from the average price in the year. The level of consumption in the year must be affected, for example, by the dispersion of prices during the year. Again, the consumption and price do not correspond exactly since the former relates to the whole of the U.S.A., while the latter is the average wholesale price in New York. Finally, of course, there is the possibility of errors of estimate in the actual records of consumption and prices.

Without a very intimate knowledge of the data, it is difficult to make more than the roughest of guesses about the nature of the configuration of deviations likely to be present. It may be hazarded that the consumption deviations are of greater importance than those in prices and that there is a significant, but not a large, amount of correlation between the deviations.[1] If the true demand relation is $y = mx$, taking the variables from their observed means, then the table below gives the values of m, computed by means of (5) and (6) from the scatter of 25 observations given by Professor Schultz, for certain stated configurations of deviations :

---

[1] In his path-breaking study, Professor Schultz considered at some length the bearing of the deviations in consumption and price upon the problem of determining the appropriate demand line (op. cit., pp. 35–39). He says that " the statistics of sugar consumption are as subject to error as the statistics of sugar prices, if not more so ". He goes on to show that, under certain conditions and when the variables are equally accurate or inaccurate (conditions which seem to correspond to the case discussed here when the deviations are uncorrelated and $\sigma_u = \sigma_v$), the true demand relation is given by the orthogonal regression line. It should be noticed that the variables, being trend ratios, are independent of the units used for measuring consumption and price. The fact that the orthogonal regression line is not invariant as to scales is thus immaterial in this problem.

Assumed value of r_{uv}	Assumed value of $\lambda_u : \lambda_v$	
	$\lambda_u = 2\lambda_v$	$\lambda_u = 4\lambda_v$
	value of m	
+0.5	– 1.92	– 2.06
+0.25	– 1.96	– 2.10
0	– 2.02	– 2.15
– 0.25	– 2.12	– 2.22
– 0.5	– 2.30	– 2.32

It is clearly seen that the numerical value of m increases as the relative importance of the consumption deviations increases and as the correlation between the consumption and price deviations changes from direct to inverse. It seems likely that the value of m lies between – 1.9 and – 2.4. The elementary regression lines give $m = -1.34$ and $m = -2.22$ respectively. Some of the likely values of m fall outside the range so determined and the elementary regressions are not of much significance if there is appreciable inverse correlation between the deviations. Professor Schultz adopts the value of $m = -1.98$ given by the orthogonal regression line, probably an under-estimate of the true numerical value of m.

The value of the elasticity of demand for sugar, in any year in which consumption and price conform to the "normal" trend values, is constant and equal to the reciprocal of the numerical value of m. The elastictity is thus likely to lie between 0.42 and 0.53. The value adopted by Professor Schultz, as obtained from the orthogonal regression line, is 0.51. This probably errs on the side of over-estimation.

COMMENTS

By Henry Schultz

Mr. Allen's approach to the theory of regressions appears so different from the generalised least-squares procedure which I used in my *Statistical Laws of Demand and Supply with Special Application to Sugar* (Chicago, 1928) and to which he refers, that it is instructive to point out some of the relations existing between them.

The generalised least-squares procedure may be summarised as follows:

Let the equation of the line be:

$$ax+b-y=0. \tag{1}$$

Let the adjusted or calculated values of the variables be:

$$x'_i,\ y'_i,$$

and let the corresponding observed values be:

$$x_i,\ y_i.$$

The residuals are then:

$$\begin{cases} v_x=(x_i-x'_i) \\ v_y=(y_i-y'_i). \end{cases} \tag{2}$$

Let W_x and W_y be, respectively, the weights of x and y which we assume are constant for all sets of observations. The problem is to determine a and b so that the sum of the squares of the weighted residuals:

$$f(a,\ b\ ;\ x,\ y)=\Sigma W_x v_x^2+\Sigma W_y v_y^2 \tag{3}$$

shall be a minimum.

Differentiating (3) partially with respect to a and b, and setting the derivatives equal to zero, we find that equation (1) is satisfied by the means of the two variables, so that the intercept b can be easily determined, and that the slope, a, is given by the roots of the quadratic:

$$a^2+a\left(g\frac{1}{r_{xy}}\frac{\sigma_x}{\sigma_y}-\frac{1}{r_{xy}}\frac{\sigma_y}{\sigma_x}\right)-g=0, \tag{4}$$

where

$$g=\frac{W_x}{W_y}. \tag{5}$$

It is impossible to determine a without making an assumption regarding the value of g.

If $g=\infty$, then (4) yields:

$$a=r_{xy}\frac{\sigma_y}{\sigma_x}, \tag{6}$$

which is the slope of the regression of y on x. If, on the other hand, $g=0$, then

$$a=\frac{1}{r_{xy}}\frac{\sigma_y}{\sigma_x}, \tag{7}$$

which is the slope of the regression of x on y, referred to the same axis as (6).

If g has any value between zero and infinity, equation (4) has two roots which are of the same or of opposite signs according as $g \lesseqgtr 0$.

If we assume that

$$g\equiv\frac{W_x}{W_y}=1, \tag{8}$$

we obtain two *orthogonal* regressions with slopes of opposite sign.

The proof is simple. In the process of deriving (4) we obtain for the relation between the weights and the residuals:

$$\frac{v_y}{v_x}=-\frac{W_x}{W_y}\frac{dx}{dy}, \tag{9}$$

where $\frac{dy}{dx}=a$ is the slope of the line. But $\frac{v_y}{v_x}$ is the slope of the line connecting the observed point with the corresponding point on the line, so that when we assume that $\frac{W_x}{W_y}=1$, we obtain:

$$\frac{v_y}{v_x}=-\frac{dx}{dy}, \tag{10}$$

which means we then minimise the sum of the squares of the perpendicular deviations of the points from the line.

Assumption (8) is the one which I made in my book *Statistical Laws of Demand and Supply*. In that work, I neglected the positive root of equation (4), because it would have yielded a *positively sloping* line, which is meaningless as a *demand* curve.

It is clear, then, that even by the method of least squares we may, under certain assumptions, obtain regression lines which lie outside the limits fixed by the elementary regressions, and which may even have slopes differing in sign from that of r_{xy}.[1]

In one respect, however, there appears to be a fundamental difference between Mr. Allen's procedure and mine. My equation (9) requires that the correlation between the residuals v_y and v_x be either 0 or ± 1. Mr. Allen's procedure enables him to consider all values of the correlation between $+1$ and -1. That by equation (9) the correlation between the residuals v_y and v_x must be either 0 or ± 1, follows from the fact that $\frac{W_x}{W_y}$ must be constant for all the observations and from the fact that $\frac{dy}{dx}$, the slope of the line, is likewise a constant. We have therefore $v_y = kv_x$. By putting $\frac{W_x}{W_y} = \infty$ and $\frac{W_x}{W_y} = 0$, we obtain the elementary regression lines which allow no deviations in *one* of the variables, thus assuming that $r_{v_y v_x} = 0$. For all other values of $\frac{W_x}{W_y}$, r is ± 1 according as $-\frac{W_x}{W_y}\frac{dx}{dy} \lessgtr 0$. These results may be tabulated as follows:

	$g>0$	$g<0$
$\frac{dx}{dy}>0$	$r_{v_y v_x} = -1$	$r_{v_y v_x} = 1$
$\frac{dx}{dy}<0$	$r_{v_y v_x} = 1$	$r_{v_y v_x} = -1$

I may add that it is impossible to make use of the method of least squares and to assume that the ratio of $\frac{W_x}{W_y}$ varies from observation to observation.

---

[1] I am grateful to my assistant, Mr. Jacob L. Mosak, for pointing out this fact.

"An African Survey"

By Arnold Plant

Five months have elapsed since the publication of *An African Survey*,[1] in which time those who are concerned with "problems rising in Africa south of the Sahara" will have had frequent occasion to consult it. On a first reading of its 1662 pages (I omit the 170 pages of index) it made a profound impression, and the respect which it then commanded has deepened steadily with each subsequent reference. The *African Survey* arose out of a proposal made ten years ago by General Smuts in a Rhodes Memorial Lecture at Oxford. Investigations were set on foot by an organising committee which secured finance from the Carnegie Corporation of New York and later from the Rhodes Trust, and Lord Hailey accepted the responsibility for the direction and conduct of the survey. Few University lectures can have prompted so eminent a band of collaborators to so ambitious and yet so successful an undertaking. The resulting volume bids fair to take its place in due time among the documents which have changed the course of history of a continent.

The mode of publication has been chosen with commendable vision. It is characteristic of the spirit which has animated the *Survey* that it should have been issued complete in one volume instead of four or five, at a price of one guinea instead of four or five, so that every official and every scholar who has to do with African affairs may keep it by him on his desk. Can one reasonably ask for more ? Perhaps one further benefaction. Many of the people who make or administer policy in Africa read French more readily than English. It would be a thousand pities if the influence of this *Survey* were long delayed or narrowly restricted for want of a French translation. The *Survey* is comparative, factual and objective ; and the British Commonwealth has its own contribution of success and failure in policy making, and of well-devised as well as mis-guided expedient in practice, to make to the pool of African experience.

To quote from Lord Hailey's preface, "The *Survey* ranges over an area in which a Dominion of the British Commonwealth and four European Powers are engaged in a common task, though in some respects with widely different methods of approach . . . The sole object for undertaking the Survey was the hope that it might prove of some service to the Powers which have possession of territories in Africa, and of some benefit to the African people. It has been felt that this purpose could best be served by a statement as largely as possible of a factual nature, so arranged as to enable the different administrations to appreciate the extent to which their problems are shared by their neighbours, and to inform themselves of the measures which are being taken to meet them ". The area covered includes all the territories in which the problems of development are most important, but it excludes Ethiopia and other Italian possessions and the Anglo-Egyptian Sudan, and less attention is given to the Portuguese possessions than to the other territories south of the Sahara.

---

[1] *An African Survey*. A study of problems arising in Africa, south of the Sahara. By Lord Hailey. xxviii + 1837 pages. Oxford University Press. 21s.

The *Survey* proceeds from a description of the peoples of Africa and their languages to an account of the existing systems of Government, of law and justice, and of native administration, followed by a close examination of social and economic development, as conditioned by natural physical conditions. The arrangement of the twenty-five chapters is by subject rather than by territory, with the result that community of problem and of experience as well as diversity of policy and expedient are continually displayed in the most convenient context. It is hardly possible to make a useful summary of the contents.

Some important recommendations are included. In the opening chapter, Lord Hailey inclines to the view that there is need in the United Kingdom for " the provision of means by which colonial affairs can come under the systematic review of a body of informed non-official opinion ". He suggests as the appropriate body " a Standing Committee of the Houses of Parliament, specifically charged to report periodically on the affairs of each colony or protectorate " and empowered on the pattern of the Permanent Mandates Commission to examine respresentatives nominated by the Colonial Office. In the penultimate chapter, three proposals are made, and endorsed by the Research Committee, concerning the future organisation of African studies. Firstly, " the research institutions of Great Britain should take a larger share in African research, as an alternative to the expansion of the establishments employed in the colonies ". Secondly, African research should receive liberal subsidy from the British Treasury, to supplement colonial contributions, and " preferably in the form of an annual non-lapsing grant-in-aid " administered by either a committee of the Privy Council or the Economic Advisory Committee of the Cabinet. " It is assumed that the body administering the fund would not institute research directly, but would operate through existing institutions in Great Britain already engaged in anthropological, linguistic, social or scientific research, or through the medium of grants to colonial governments." Thirdly, in order that information concerning Africa be made more readily available, the committee " strongly advise the institution of an African Bureau, preferably situated in London," at an estimated initial cost of about £10,000 a year, and preferably " controlled by a non-official body " while drawing its finance from the British and Colonial Governments and, it is hoped, from other sources.

The *Survey* itself provides the best evidence of the case for implementing these proposals. It is a pioneer example of the kind of enquiry which should be kept continuously in progress, and we have not far to look for proof of its value to the British Government. For example, there has recently been issued the Report of the Rhodesia—Nyasaland Royal Commission (Cmd. 5949 of 1939). In their prefatory remarks the Commissioners refer to the advantage they enjoyed in their ability to consult the *African Survey* while engaged in drawing up their report on their return to England. "This comprehensive study of problems in Africa south of the Sahara has been of great assistance in enabling us to consider questions arising out of our Terms of Reference in the light of experience in other parts of the Continent" (Paragraph 12). Criticising the frequent change of personnel in the civil service of Northern Rhodesia (Paragraph 375), the Commissioners "are disposed to endorse" the suggestion in the *African Survey* that strong reasons now exist "for constituting a separate branch of the Colonial Service, confined to employment in Africa". Their proposal, again, to increase the number of elected members in the Legislative Councils of Northern Rhodesia and Nyasaland to equality with the official members, subject to separate provision for representation of native interests and to reservation of powers to the Governor, follows upon appreciative quotations (paragraph 439) from the discussion in the *African Survey* of these problems of development towards self-government in British Tropical Africa. The Report of the Commissioners is concerned only with the next step in the relations between these territories, in the expectation that the objections to their eventual amalgamation will gradually be lessened. In the meantime, "there should be some provision for a periodical review of the progress made," and the governments concerned should examine the position periodically. The recommendations contained in the *African Survey* have an obvious relevance.

The objection to the immediate amalgamation of the territories of Northern Rhodesia and Nyasaland with South Rhodesia arises out of the divergence in the trend of their native policy. In self-governing Southern Rhodesia, containing 55,000 Europeans but a proportion of 22 natives to each European, it is "in some respects restrictive, and will, if persisted in, limit the opportunities open to Africans, as they gradually emerge from their present backward condition". In Northern Rhodesia, with 11,000 Europeans, and in Nyasaland with under 2,000, but with proportions of natives to Europeans of 129 to 1 and 881 to 1 respectively, His Majesty's Government in the United Kingdom has laid it down that the aim of administration shall be to promote the welfare of all the inhabitants irrespective of race or religion, and that persons of every race have a right to equal treatment in accordance with their several needs. Both policies are, however, in an experimental stage. "The reactions of the present policy in Southern Rhodesia cannot yet be fully determined, and modification in the light of experience is not ruled out." The Commissioners expect that a greater measure of general co-operation and consultation between the Governments "will render practicable a blending of the two as the relative merits of each become apparent, or even lead to the replacement of both by a fresh policy based on collective experience".

This divergence between the native policies of the various governments, and the resultant clash of regulations affecting the economic freedom of the native peoples, constitute the central theme of the *African Survey*. The territories cannot be insulated completely one from the other. Natives migrate, both subject to legal restrictions and in spite of them. Products involving the use of native labour are exchanged across territorial boundaries. The boundaries cut across racial and tribal groupings, and news of differences in the degree of discrimination travels quickly and generates disturbance. The *African Survey* most admirably recounts the facts concerning these central problems of racial discrimination in economic policy. The authors might indeed have gone a little farther towards furnishing an authoritative statement of the principles which must underlie policy, if it is to achieve its objects with some degree of permanence. Even the factual statement has involved conclusions concerning trends, and explanations of current behaviour, and one or two disappointing blemishes in the survey might have been avoided by more systematic consultation and discussion with specialists.

It is, for instance, unfortunate that the chapter on the problem of labour should open (page 603) with a paragraph representing the "inadequacy" or "shortage" or "deficiency" of the labour supply to be "a distinguishing feature of labour problems in Africa". The supply is "short", in Africa as elsewhere, firstly in the sense that it commands a price, from which point of view it is indeed far less scarce than elsewhere; and also because the native workers are not encouraged by some governments in Africa to do more paid work than they need, in view of the unpleasant restrictions placed upon native work in the territories in question. The economists who have made a special study of this field might have helped the organisers of the *Survey* to prepare an agreed statement of the real peculiarities or distinguishing features of the African labour market. The attitude of workers is sometimes best understood by considering wages, conditions of work and prospects together. Similarly, to understand the arrangements made by employers, it may help to ask what incentive an employer has, to try to induce willing and efficient workers to stay with him. Viewed from these standpoints, differences between the Union and Southern Rhodesia on the one hand and the tropical territories on the other assume a more rational aspect. Where the scene is dominated by the sectional interests of the present generation of European workers, an employer must resign himself to the fact that native workers, whatever their potentiality and co-operativeness, are not legally capable of anything more than unskilled tasks. They are like office girls who retire at marriage, and are likely to marry. What incentive has a mining company to invest money in training natives, or in building up a permanent labour force? Why build and maintain married quarters in the locations? How much wiser to depend upon migrants from the reserves, organising the work in such a way that even a piece-work system has little to commend it, as compared with the simplicity of treating native workers as an undifferentiated mass of human energy. For such conditions, with all their social and economic repercussions, it is the "civilised labour policy" of governments and not the inhumanity of the employers which must be held responsible. Is it surprising that natives in general lack enthusiasm for such work? Contrast some of the arrangements in tropical territories, where the native workers in the mines are settled permanently with their families in townships, and rise to positions demanding skill and responsibility.

The discussion of wages follows tradition with undue fidelity in its assumption that custom largely determines the level of remuneration. Natives are said to be paid at rates "suitable to native conditions. The essential feature of these conditions is assumed to be, that the native employee is not entirely dependent on wage-earning, and that he and his family can, if necessary, draw their subsistence from the land, the wage thus representing only a means of satisfying requirements which have to be met by cash expenditure" (page 682, and, again, 687). One would have hoped on the contrary for a clear recognition that the importance of the reserves (like the "pin-money" of the semi-independent young lady) lies in the additional power which they give to such natives to pick and choose their work instead of being obliged to accept an early offer. The possession of land in a reserve increases rather than reduces the bargaining power of the natives, setting a lower limit to the terms which an employer can offer, not excluding the central "monopsonist" labour department of the Chamber of Mines, despite all the skill displayed by its recruiting staff. A good harvest in the reserves does *not* enable the mining companies to cut wages! On the contrary. It is consequently quite erroneous to argue that the inadequacy of the wages of urbanised natives is explained by a general readiness of those from the reserves to accept less than the full cost of subsistence. Wage offers have no such direct relation to the cost of living in any particular condition, but are determined by the desire of natives for income, the nature of their other sources of income, and the attractiveness of other offers of employment. Similarly, it is misleading to suggest that the high level of wages of skilled European workers in South Africa is to be simply explained as a sort of hang-over from the gay times of the early mining boom. The statutory wage-rates determined under the Industrial Conciliation Act, supported by the Apprenticeship Act which controls the admission of new recruits and is so administered as to see to it that their skin is white, provide a more satisfying explanation. More emphasis might well have been placed upon these causes.

They do in fact receive further attention in a chapter devoted to the internal aspects of economic development. Here it is suggested of the " civilised labour policy " that " it is by no means clear that it involves the community in greater expenditure than if it made the minimum practicable provision for its white unemployed " (page 1370). Assuming with the author that the end in view is the growth of a primarily white community, the wisdom of the policy is still very questionable. The test which he adopts, of the amount of expenditure involved, is clearly inadequate unless it is applied in relation to the effect of the policy on the size of the national income from which it has to be paid. The reservation of government railway posts for Europeans at relatively high wages, the protection of industries on condition that an approved proportion of Europeans are employed, and similar devices which involve a substantial increase in production costs, check the growth of the export trades (in 1923 exports were equivalent in value to 42 per cent. of the national income) and of the home market, particularly among the native peoples. There is surely a presumption that the national income would have been much greater if " the most economical employment of resources " were made the guiding principle of economic policy, and the fund from which unemployment relief has to be paid would have been better able to stand the expenditure of maintaining Europeans who failed to be absorbed into employment by the expansion of business.

An equally debatable judgment is volunteered in the same chapter concerning the South African policy of protection which was intensified in 1925. The opinion is advanced that " there can remain little doubt that when all reasonable allowance has been made for the effects of increased costs upon mining and existing export industries and for any consequent maldiversion of resources, the protective policy has made quite a substantial addition both to employment and to the national income ". The increase is attributed to the protective policy. The belief rests upon the contention that before 1925 high money wages condemned the economic system " to run at half pressure " with consequent unemployment. There is difficulty in fitting the facts to the theory. Unemployment was not especially prevalent in 1924/25. A highly ingenious answer is ready : " The consequent unemployment took, however, a somewhat different form from that which it would take in a European country. The white workers who might in other circumstances have been employed in skilled and supervisory tasks have been forced to content themselves with less highly paid posts. The unskilled Europeans have been forced into more intense competition with native labour. The native labour displaced by this competition, and by the civilised labour policy consequent upon it, has been thrown back upon its own resources, and thus upon the production of its own native agriculture in the reserves " (page 1372). Create prosperity, in fact, by protecting the aristocracy, who otherwise take the poor man's work! If the objection be repeated that cost-raising devices jeopardise the vital export trade of South Africa, the answer here given is that the currency was devalued eight years later in order to help the gold mining industry and that agriculture was assisted by export bounties. If the further objection be raised that a policy, which offered the certainty of an increase in the already high costs of living and the mere hope of a share in the sectional advantage, represented a dangerous gamble for the poorer Europeans, the answer offered is that though protection may have mitigated their plight " it has by no means removed the problem completely ". Those who ask how the policy has affected the bulk of the population, the natives who are forbidden to share in the spoils accruing to the protected industries and handicapped by the high cost of every requirement of civilised life, will be disturbed to find no consideration given to them in the process of arriving at this somewhat sophisticated judgment.

A highly informative account of the history of forced labour in Africa, included in the chapter on the problems of labour, concludes with the judgment that " though some abuses of authority still exist, there is a consistent movement in all territories towards a more efficient regulation of the use made of forced labour, and the substitution of voluntary labour " (page 630). One looks in vain for a discussion of the principle by which " abuse " may be defined. It may be suggested that the appropriate distinction is between work of current maintenance and that of capital improvement and construction. Forced labour for maintenance of public works, accompanied by scales for commutation by payments in money or in kind, is clearly a legitimate tax. Capital works, on the other hand, are normally undertaken only if the anticipated future flow of income from their construction justifies the interest charge on the cost, including all labour costs, of construction. If subsidy is to be avoided, the labour for such purposes should be hired and paid out of the fund raised for the capital purpose. For lack of some such principle, the phraseology of part of the historical account is somewhat unfortunate. It is stated that the building of the Uganda railway " necessitated " forced labour from India; that the French Government " was driven " in 1885 to import forced labour, and that " the use of impressed African labour became in many cases imperative ". In each case a compulsory capital levy to pay volunteer labour might have been considered equally imperative, but that expedient quite rightly was not adopted.

In order to secure a picture of capital investment, the African Research Survey in 1935 commissioned Professor S. H. Frankel to prepare an account of European investment in Africa, showing the form it had taken, the functions it had performed and the factors which may be expected in the future to influence the further supply. The statistical material compiled by Professor Frankel and his assistants extends to 102 tables and six charts, round which he has written his study of *Capital Investment in Africa: Its Course and*

Effects,[1] issued as a complement to *An African Survey*. Professor Frankel has found his material difficult to handle, and has felt it desirable to re-write a good deal of the economic history of the Union of South Africa and of the other territories as a setting for his statistics. That account will be of value to those readers who approach the subject for the first time, though it may be questioned whether it is really necessary, in addition to an extensive bibliography, for the majority of those specialists who will have the most frequent recourse to the tables. Of the new and valuable material presented in the volume, interest will centre mainly on the estimate of total capital from abroad invested in Africa from 1870 to 1936, ignoring amounts repaid or lost, and including a conjectural figure for each territory of investments made by companies and persons and not "listed" in the money markets. The total for all British and non-British territories covered by the Survey (and including also the Anglo-Egyptian Sudan and British Somaliland) is £1220 millions—nearly equal, that is, to the combined capital of the four main-line railway companies of Great Britain—and of that sum over £546 millions was introduced on Government accounts.

Professor Frankel makes no attempt to estimate the amount of capital now actually held by British and other investors in Africa, but he expresses the view, without discussion but following Professor Eugene Staley, that the estimates of Sir Robert Kindersley are too low. In addition, the average rates of interest payable on funded debt in British Africa are calculated for the four years 1913, 1925, 1932 and 1935. Financial statements, railway returns and trade statistics are collected for a term of years for each of the African territories.

Professor Frankel in his conclusion expresses doubt whether either the future supply of capital or the future opportunity for investment in Africa, as a region producing raw materials, will for the time being continue at the same rate as hitherto. So far as railway construction is concerned, his conclusion is that "in general, African railways have been constructed upon the basis of a too optimistic view of the rate of economic development in the territories they serve". For the future, "at no distant time the greater part of Africa will be linked up by an excellent system of all-weather roads" and by "the vast network of airways, which has been planned already, and much of which is being operated to-day". It remains to be seen how fully the controlling authorities, with excessive railway investments on their hands, will allow the African communities to enjoy access to these new facilities. Plans for "transport co-ordination" are almost as rife in this undeveloped continent as in Europe, and even to the compilers of the *African Survey* it appeared "clear that unrestricted competition between transport undertakings is not in the general interest, and some form of regulation of transport must be regarded as essential for co-ordination" (page 1609). In the interest, must one presume, of the now severely threatened system of human porterage?

---

[1] *Capital Investment in Africa: Its Course and Effects.* By Professor S. H. Frankel. xvi + 487 pages. Oxford University Press. 10s. 6d.

Book Reviews

The Theory and Measurement of Demand. By HENRY SCHULTZ. Chicago: University of Chicago; and London: Cambridge University Press. 1938. xxxi + 817 pp. 34s.

This monumental work, published three months before the lamented death by accident of the author, is the result of more than ten years' research supported by the Social Science Research Committee of the University of Chicago. Apart from the statistical results, it is of special importance because it contains a careful summary of the various methods by which the problem of measuring the elasticity of demand has been approached by other writers, together with an admirable bibliography, so that the path is made easier for all future workers in this field. In spite of its expense, partly due to the over-lavish furniture of diagrams and explanations, it is necessary that every student of econometrics should become familiar with it.

No one who has followed the work in this subject need be deterred by the elaboration in more than 800 pages of the theory and working-up of data. Part I, "Theoretical Foundation," summarises the theory and assumptions on which the statistical analysis depends, and though it contains much that is interesting, there is little, owing in part to the author's earlier publications, that is unfamiliar. Similarly Part III, "Interrelations of Demand," on the theoretical side is mainly an account of known analysis of complementarity, but it also includes instructive statistical illustrations.

Part II, which is the main body of the work, exhibits in detail the equations of demand for ten agricultural products. The method can be completely mastered by working through the first section, that on sugar, and then looking at the formulæ in Chapter XVI on trend-ratio and link-relative methods. Thus prepared the reader will find the gist of the results in Chapter XVII.

The practical conclusions, if established, are of great importance. The elasticity in every case (except in some periods for rye and for buckwheat) is less than unity. The demand for the more important crops has diminished, especially in recent years. Thus in the summary on wheat we read: "The findings that the demand for wheat is very inelastic, and more especially that the demand curve has been shifting downward with time, are of paramount importance to the wheat farmers and to the American people as a whole. An inelastic demand means that, *other things being equal*, a bumper crop will sell for less (in the domestic market) than a moderate crop. This fact has recently been used as an argument in favour of the restriction of output by the A.A.A. If the downward shift of the *per capita* demand curve does not come to a stop in the near future, then all the plans for restriction of output as were sponsored by the A.A.A., or as are now being sponsored by the United States Department of Agriculture, will give only temporary relief, for it will only be a matter of a few years before the downward shift of the curve will counteract the gain obtained from the creation of an artificial scarcity."

It may be held that the theoretical analysis of the nature of demand is irrelevant to the statistics. The theory depends, broadly speaking, on the indifference curves of an individual as a final consumer. The statistics relate solely to wholesale prices and sales. "The primary data that are needed are the quantities bought each year (or other period) by the wholesale-dealer-farmer-consumers from the farmer-producers, and the corresponding average unit prices." It cannot be supposed that a corn-dealer has in his purchases any reference to an indifference curve that relates to sugar or cotton. The wholesale demand is derived from the retail demand, and especially in the case of farm crops it has been shown that the expense of distribution plays a dominating part in the determination of wholesale prices. In fact the statistical analysis does not depend on any theory, except for suggestions of method, but is a direct study of the relations between quantity and price in the wholesale market, with reference to the influence also of changes in other factors.

Till we come to Part III the only other factors considered are the general movement of prices as shown by the wholesale prices index number, the growth of population and (in some cases) a general index of prosperity, as measured by Industrial Production and Trade. The population factor is disposed of by taking the consumption as *per capita*, thereby assuming that the changes in the sex and age constitution of the population have no effect on the average demand. The prices of each commodity treated are deflated or inflated by the general index number, and the results are termed "real prices". It is a far cry from the purchasing power of a dollar in an individual's economy to the change of wholesale prices of basic commodities, but there is no other course generally available, and possibly there is no serious influence on the historical movement of elasticities as measured in the sequel. The index of prosperity, when used, is introduced as an independent variable.

We have then in general x, the consumption *per capita*, y the "real" wholesale price, for each of a series of years, viz.: in the three periods 1875-1895, 1896-1914, 1915-1936, with some variations of date and omissions of particular disturbed years. The problem is then to express x as a function of y and t (the time). In the simplest setting the relation is written $x = a.y + b.t + c$, where c is a constant. The values of a, b and c are determined by the method of least squares, though other methods might be substituted.

The elasticity is then $\frac{\delta x}{\delta y}\cdot\frac{y}{x} = \frac{a.y}{a.y+b.t+c}$ or at the average $\frac{a\bar{y}}{a\bar{y}+c}$ where t, measured from the central year, is zero.

Alternative equations are $log(x) = a.log(y) + b.log(t) + c$, where the elasticity is a throughout the curve; and two pairs of similar equations where x, y are replaced by their ratios to the corresponding values on computed trend lines, or by the ratios of their values to those of the next year before. In these equations t does not enter.

The quantity b measures the shifting of the demand curve through time. It is in most of the cases negative, at least in the last period, thus indicating a weakening of demand.

It is clear from mathematical considerations and is substantiated by the arithmetic that, when we are only considering the centre of the period and the averages of the quantities and prices, each of the six equations gives practically the same measurement of elasticity. It may also be asserted that there are not enough points and the data are not sufficiently precise to determine which formula is the best. We cannot say, for instance, that if the second of the equations gives the best fit that it is shown that the elasticity is constant. The measurement R, the general correlation coefficient, is given prominence as indicating the goodness of fit between the formula-results and the data. Here $R = \sqrt{(1 - d^2)}$, where d is the ratio of the mean-square average of the distances of the given points from the value given by the function (measured parallel to x) to that of the distances of the original values of x from their average. The fit can only be said to be good when R is very near unity; for example, for corn in the third period $R = .897$, which looks satisfactory till it is expressed as $d = .44$, which is by no means negligible.

Perhaps it should be said that the standard errors affixed to all the elasticities and constants only measure uncertainty in a conventional sense, namely, that if the observations are distributed in a random fashion about their normal or computed values then their average is subject to the error named. Their use is negative; if the standard error is not smaller than the elasticity, then the data are not numerous enough to establish the value of the elasticity.

The introduction of the t term into the equations, and the consequent use of partial correlation coefficients to measure the elasticity, is of great importance. It carries the assumption that all the factors and movements not directly brought into the equations have moved during the period in an orderly and continuous manner. It is described as a "catch-all" for the omitted influences.

These difficulties of choice of method, of validity of assumption and of interpretation of results, are inherent in all attempts to measure demand, when we are only given isolated observations in a changing environment. Their enumeration is not in any way an unfavourable criticism of the book, in which they are fully realised. In spite of them all positive results have been obtained and there is encouragement in this to other workers in this difficult and important sphere of econometrics.

A. L. BOWLEY.

Monetary Policy and Crises. A study of Swedish experience. By BRINLEY THOMAS. London: George Routledge and Sons. 1937. 247 pp. 7s. 6d.

In many respects, no doubt, the insular character of English economic theory has been a source of strength. Yet its admirers in foreign lands cannot help thinking that it might have been considerably enriched by a closer contact with continental economic doctrine. They regret that so many British economists have taken a similar attitude as Mr. Keynes, who boldly confesses that "in German I can only clearly understand what I know already!—so that *new* ideas are apt to be veiled from me by the difficulties of language". He and Mr. Hawtrey, e.g., might undoubtedly have obtained their important results more easily—and perhaps have reached still further—if the teachings of, say, the great Austrian and Swedish economists had been part of their economic training.

Fortunately, a change is noticeable in this respect at present. For several years a fruitful absorption of Austrian economics has been under way, and with the present volume Dr. Brinley Thomas has made a gratifying attempt at acquainting his countrymen with the fertile Swedish economic literature, which, owing to the difficulties of language, is and must be a closed book to most English economists.

Indeed, it is a formidable task which Dr. Thomas has set up for himself. He intends to give an account both of (1) the monetary theories and business cycle theories of two generations of prominent Swedish economists and of (2) their application to Swedish monetary policy from the war inflation period to the recent slump and recovery. This is really too much for one volume. The inevitable consequence has been a somewhat inadequate treatment of both subjects. Regarding monetary theory one might perhaps rather say that Dr. Thomas gives at the same time too little and too much; too little for professional economists wanting a real and thoroughgoing knowledge of the teachings of the "Stockholm school", too much presumably for those whose primary interest it is to learn the results of the recent "Swedish experiment". Regarding the actual course of events in recent years laymen and professionals alike will probably deplore the highly concentrated form in which the abundant statistical material is presented and wish for broader comments and comparisons.

On the other hand, considerable space might have been profitably saved, in the opinion of the reviewer, by omitting the account of the economic policy during and immediately after the Great War, since an excellent analysis of this period is already available in English (Eli F. Heckscher, *Sweden's Monetary History, 1914–1925*, in *Sweden, Norway, Denmark and Iceland in the World War*. New Haven. 1930). One of the most interesting theoretical problems raised during the war was probably that of the gold exclusion policy, which may be described as the first—unsuccessful—attempt at realising the Irving Fisher plan of a " compensated dollar ", i.e., of a varying gold price at the central bank. But Dr. Thomas's very brief account of this episode hardly gives the uninitiated reader the full understanding of its theoretical and practical implications. On what grounds, e.g., does the author conclude (p. 8) that " it was not to the interest of Denmark and Norway to raise the value of their currencies above that of gold " ? All that can be said is probably that neither in Sweden nor in Denmark and Norway did the responsible authorities perceive the advantage of avoiding to share the general world inflation and that none of the countries used the gold exclusion for introducing a genuine " multiple standard ".

The greatest interest undoubtedly attaches to the chapters in Dr. Thomas's book dealing with the recent slump and the measures adopted in Sweden to cope with it. In an introduction to the book Dr. Hugh Dalton describes it as " an explanation of what must seem, to dwellers in less happy lands, an economic miracle ". He admits that " external factors, such as the rise in certain export prices, have helped a little ". But primarily he ascribes the Swedish recovery to " internal action, based largely on the theories of Professor Gunnar Myrdal and executed with great political skill and economic insight by Ernst Wigforss, the brilliant Finance Minister in the Swedish Socialist Government ". The author of the book expresses himself much more guardedly. He gives his final conclusion in the form of a question : " What weight are we to ascribe to the different factors in the recovery of Sweden ? Depreciation of the currency, public investment financed out of loans, the rapid revival in the demand for exports, and the Central Bank's easy money policy all played a part " (p. 233). Yet the general tenor of Dr. Thomas's analysis gives a much too strong impression both of the extent to which the development in Sweden has been the result of a deliberate policy and of the role played by the professional economists in the formulation of this policy.

Though Dr. Thomas explicitly points out that the Swedish experiment " gives no support to the naïve gospel of price stabilisation preached by Professor Fisher ", it is doubtful whether his readers will realise that the various official declarations of the aims of future monetary policy which were issued in 1931 and later and which clearly bear the impress of theoretical economics, mentioning internal purchasing power, price levels, etc., were, on the whole, merely ornamental, and that in its practical policy the Swedish Riksbank has confined itself since the summer of 1933 to a pegging of the sterling rate, so that for the time being Sweden, like Denmark and Norway, has what may be called a *paper exchange standard* and not a paper standard pure and simple.

Dr. Thomas may reply that when he wrote his book one might still believe that if the internal stability and prosperity stressed in the official declarations should become incompatible with the maintenance of a fixed sterling rate the latter would have to be sacrificed. But after the sharp rise in prices which was allowed to occur in 1937, " not even the most clever art of interpretation "—to use Professor Erik Lindahl's words—" can conceal the fact that the ingeniously formulated programmes had been given up."

A central position in the myth about the Swedish miracle is occupied by the " sensational " results of the unorthodox budgetary policy inaugurated in 1933. Though less enthusiastic than Dr. Dalton, the author attaches considerable importance to this factor. Too much importance, one is inclined to think, after comparing Dr. Thomas's account with the excellent analysis of the same period recently published in English by the Swedish economist, Professor Arthur Montgomery (*How Sweden Overcame the Depression*. Stockholm. 1938). In his opinion the most important factor, indeed the only really important factor, in Sweden's economic revival is to be found in the favourable competitive position which her leading export articles have enjoyed on the international market. Compared with this Professor Montgomery regards the effects of the Swedish financial policy on the upswing as relatively slight. This conclusion he sustains by a comparison with the development in Finland during the same period. In spite of the fact that their financial and unemployment policies were radically different the upward movement in the two countries was fairly parallel. He even thinks that the cautious restrictive budgetary policy which, partly for reasons of principle and partly from necessity, was pursued in Finland was more effective in bringing about the turn than the moderate Swedish expansion. In other words, the support given to Finnish exports by wage reductions proved more efficient than the Swedish efforts to stimulate the home market.

Elsewhere (*Explorations in Economics*. New York. 1936) the reviewer has attempted to show that similar conclusions emerge from a comparison with the situation in Denmark that suffered in the same period from a falling off in the international demand for her leading exports. It has even been argued that one might more appropriately speak of a Danish than of a Swedish monetary experiment in these years. The Danish budgetary policy remained somewhat more " orthodox ", but in other respects the expansionist measures were more radical in Denmark. For, on the whole, the Swedish policy was much more moderate than it needed to be, or rather, the basic conditions in Sweden were so favourable that it was not necessary to take very radical steps; one could afford in greater measure than elsewhere to be faithful to the old prejudices. In Denmark, on the other hand, the attempt to create an expansion, primarily by means of easy money, was carried to the utmost limit set by the narrow "international margin".

Another factor to which Dr. Thomas hardly gives sufficient weight is the very low interest level obtaining in Sweden in this period. These low interest rates have had an immense importance by furthering the process of rationalisation in industry, and it was owing to this rationalisation, among other things, that the expansionist policy could avoid exerting too great a pressure upon the export industries.

The brief sketch which Dr. Thomas gives of the monetary theories of Swedish economists is, on the whole, correct, but as already intimated hardly sufficient to meet the requirements of serious students. It is to be hoped that Dr. Thomas will utilise his excellent knowledge of the Swedish language and his intimate contact with the Stockholm group of economists for a second volume dealing in greater detail with their contributions not only to monetary doctrine but to other fields of economic theory as well.

CARL IVERSEN.

A Century of Bank Rate. By R. G. HAWTREY. Longmans. 1938. ix + 328 pp. 10s. 6d.

Mr. Hawtrey's latest contribution to the history and theory of interest rates falls naturally into two parts. The first, comprising chapters I to V, deals mainly with the history of the Bank of England rate from 1832 to 1932, though incidentally touching upon many important points of theory; the second, comprising chapters VI to IX, deals mainly with the theory of interest rates.

The historical chapters examine in some detail the origins, in the years 1832 to 1858, of the traditional view of the effects of bank rate changes, and then trace the working of the bank rate from 1858 to 1932, mainly with reference to gold movements, changes in business activity, and long-term interest rates. These chapters will be invaluable for reference, but they are so closely packed that, even with the help of the statistical appendices, it is not always easy to follow with full comprehension the intricate series of events described. It is possible that a chart to be studied simultaneously with the text might have proved useful here. It might also have been helpful if Mr. Hawtrey had added to the other information in the statistical appendix a statement of British imports and exports to illustrate the effects of bank rate changes on the balance of trade.

Two at least of the points made in this part of the book are novel, or at any rate inadequately realised. The first concerns the inconvenient effects of bank rate changes on the internal demand for currency in the period before branch banking became general. "We find repeatedly that at times of depression there is a big interior demand, and at times of rising wages and active employment interior demand falls off and even becomes a negative quantity" (p. 50). The clue to this apparent paradox is to be found in the fact that times of depression are also times of low interest rates. When each country bank had to keep its own independent reserve of cash, it was often not worth while for country banks to go to the expense of sending their surplus cash up to London for investment, while banks in areas absorbing cash still required to draw a certain amount from London. Thus the lowering of the discount rate tended to bring an immediate net outflow of gold from London, forcing a premature rise in the rate while business was still depressed. In a period of increasing activity, similarly, a rise in the discount rate would bring cash out of the interior of the country, which would postpone the checking of the boom. This disequilibrating phenomenon decreased in intensity with the growth of branch banking and the improvement in communications, and finally disappeared in the last quarter of the nineteenth century.

Another novel point concerns the effects of bank rate changes on international gold movements. Mr. Hawtrey observes that, when gold was widely used as currency, these took place, not in two, but in three stages. The first stage after a rise in the bank rate was the attraction of gold by means of the differential rate of interest. At the second stage, depression at home and continued activity abroad caused a favourable balance of payments. But the work was not completed until the third stage, when the spread of the depression to other countries caused activity and prices to fall throughout the world. Less money was needed everywhere for circulation and surplus gold collected in the central banks. The surplus gold of the world tended to move to London, the principal banking centre. Only with this third stage could the drain of gold be considered to be finally checked and a prolonged period of cheap money be expected. With the disappearance of gold coin the importance of the third stage was largely diminished, for a mere fall in note circulations and a moderate rise in reserve ratios has a much less marked effect.

The second half of the book is largely devoted to a very effective re-formulation of Mr. Hawtrey's well-known thesis that it is to changes in the short-term rate of interest, rather than in the long-term rate, that we must attribute the initiation of changes in business activity. It is true that common causes may at times raise long- and short-term rates together, but there are well-authenticated cases when a rise in the short-term rate was enough to check business expansion, though the long-term rate was unchanged. It is also true that even a small rise in the long-term rate, if it is expected to be temporary, may have the effect of inducing the postponement of the long-term financing of enterprises which would have been hardly affected if the rise had been expected to be permanent. But the very fact that the rise in the long-term rate is regarded as temporary implies a much larger rise in the short-term rate, and it is the latter which prevents the immediate financing of enterprises on short term pending the expected fall in the long-term rate.

While a change in the rate of interest has only trifling effects on the total costs of most firms, a change in the short-term rate has substantial effects on the cost of carrying stocks, and is well able to influence the policy of merchants and others in this regard. It is true that the actual rise in the rate often seems too small to have the effects attributed to it; but this "psychological" effect is the result of experience and of the consequent expectation that, if the present rise is inadequate, it will continue until it is effective. A decrease of stocks in merchants' hands implies decreased orders from suppliers, and sets in process a deflationary spiral, which is re-inforced only at a much later date by a reduction in the output of durable goods financed on long-term.

In conclusion, Mr. Hawtrey surveys the various methods of credit control which have come into vogue in recent years, and gives it as his opinion that none of them can replace the bank rate as a flexible and effective instrument of credit control, whether on the gold standard or with a managed currency.

Mr. Hawtrey writes throughout with all his accustomed cogency and clarity, and his book will be welcomed alike by historians and theoretical economists.

F. W. Paish.

The Reciprocal Trade Policy of the United States. By Henry J. Tasca. University of Pennsylvania Press. 1938. 371 pp.

The importance, both actual and potential, of Mr. Cordell Hull's gallant effort to "throw the weight of American power and influence against the current disastrous world movement towards economic nationalism" abundantly justifies the strenuous labour which Dr. Tasca has put into his elaborately documented study of the reciprocal trade policy of the United States. After a brief outline of the background of international economic relations which make the relaxation of trade barriers such a vital issue for the United States, and of recent trends of opinion and policy in the United States itself, he tells the story of the legislative adventures which preceded the passage of the Reciprocal Trade Act in June, 1934. Then follows a valuable analysis of the machinery of negotiating trade agreements, an examination upon "functional" lines of the treatment accorded to the various problems which arise when bilateralism is combined with adherence to the Most-Favoured-Nation principle, an estimate, necessarily provisional in 1938, of the effects of the Agreements upon world trade, and concluding observations upon the general significance of this radical change in American commercial policy. The story upon which the analysis is based ends early in 1937 and there is no direct reference to the Anglo-American negotiations, but in a book which is a study of principles and problems rather than a history, such absence of complete up-to-dateness does not seriously diminish its usefulness.

Dr. Tasca has a sturdy faith in the maximisation of real income through the extension of international division of labour, and his work is none the less valuable because he makes few concessions to the weaker brethren who in recent years have shown a disposition to come to terms with the rising power of neo-mercantilist prejudice. There is no question of either the wisdom or the necessity of making "a full frontal attack" upon trade barriers, and the Cordell Hull technique, it is believed, offers a useful instrument for this purpose. There may be a profound logical disharmony between any conceivable system of quotas and the Most-Favoured-Nation principle, but in an imperfect world that is no reason for refusing to press as vigorously as possible for a reconciliation between these two divergent, not to say contradictory policies, and the American negotiators have apparently had considerable success in preserving the substance of the Most-Favoured-Nation principle, even where quotas, exchange control and administrative protectionism were important instruments of trade policy.

While still maintaining an attitude of reasonable caution in interpreting the immediate consequences of reciprocal trade policy, Dr. Tasca appears to take a slightly more favourable view than did Professor Bidwell in his recent study, *Our Trade with Britain*, where the discounting process was applied rather more severely. At least one reader of his book had incautiously supposed that the chief supplier formula, directing attention in the first instance to those imports of which the other party to a contemplated agreement is the most important source of supply for the United States, must necessarily limit severely the range within which the new technique could be applied. He was accordingly interested to learn that this formula has no formal legislative authority, but was rather imposed by the difficulties which would otherwise arise in interpreting the requirement for exchange of reciprocal benefits. Where the bargaining process can be made more effective by departing from the chief supplier rule there is no objection to so doing, and the agreements have already included several tariff reductions where the other contracting party was not the main supplier.

Dr. Tasca has made a valuable and weighty contribution to the realistic literature of modern international economic relations.

Allan G. B. Fisher.

Slump and Recovery, 1929-1937. By H. V. Hodson. Oxford University Press. 1938. 484 pp. 10s. 6d.

Mr. Hodson has provided a very useful book of reference by weaving together into a continuous narrative his contributions to the *Survey of International Affairs* published annually by the Royal Institute of International Affairs. These contributions happen to cover a complete cycle since that for 1930 naturally contained an account of the break in the 1925–9 boom. It is a tribute to their quality that they can be reprinted with little alteration to give an outline picture of a very troubled decade. The writing of contemporary economic history must depend upon judgment in the selection and balancing of important developments in a confused and complex pattern of events. Inevitably it is easier to write of government action, of conferences, restriction schemes and currency decisions than of the background of economic activity. It is of such government and group reactions to economic pressures rather than of the economic facts themselves that Mr. Hodson writes. The time has perhaps not yet come for an appraisal of the shifts in production and trade that are part cause and part effect of the policies pursued. Meantime this book is extremely useful if only as a reminder of events which are too easily forgotten in a period of rapid economic and political change.

Two passing comments may be made concerning the arrangement which has grown out of Mr. Hodson's year-to-year observations. It is, first of all, significant that at the beginning of his story he is able to trace the crisis and its development internationally. After the failure of the Monetary and Economic Conference of 1933 (which is consistently referred to as the World Economic Conference) it becomes necessary to trace *national* efforts at recovery. The second observation relates to the somewhat sombre conclusion at which Mr. Hodson hints in his concluding paragraphs. His thesis is not worked out but essentially it is that economic prosperity and political understanding are inextricably linked. It is not exactly an optimistic deduction from present facts, but it is profoundly true.

J. B. CONDLIFFE.

John Bates Clark. A Memorial. Privately printed. 1938. 40 pp. (By special arrangement, copies may be obtained from Columbia University Press, New York, N.Y. Please enclose fifty cents towards meeting postage and other costs.)

When John Bates Clark died on March 23rd, 1938, at the age of ninety-one, he had become to the younger economists on this side of the Atlantic an almost legendary figure and to some he seems to be known mainly as a kind of modern Bastiat, a last believer in the natural harmony of the economic forces. This is not the place to defend him against this misinterpretation. And of his great achievement in the realm of economic theory, the development and definite establishment of marginal productivity analysis, which places him among the founders of modern economic theory, it will be for the future historian of economic thought to speak. But we all should be grateful for this charming memorial to John Bates Clark the man, one of the most lovable and wise among the teachers of his generation, as one who knew him well during his last year of active teaching can testify. Many must be those who owe him a deep debt of gratitude for the generous way in which he befriended and guided them in the early steps of their scientific careers. And to those who never knew him this modest sketch of his life and activities will give a vivid view of one of the really great figures in our subject.

Perhaps this is the proper occasion to make a small contribution to the biography of J. B. Clark by reprinting the following letter which happens to be in the possession of the reviewer. It was written soon after the appearance of the late Robert Zuckerkandl's *Theorie des Preises mit besonderer Berücksichtigung der Lehre* (Leipzig 1889) and enclosed with it was a copy of the *New Englander*, No. CLXI, July, 1881, containing J. B. Clark's article on "The Philosophy of Value":

"Smith College, Northampton, Mass. Jan. 14th, 1890.

Dear Sir,

I am at present deriving profit and pleasure from the reading of your admirable book on the *Theory of Price*. I take the liberty of sending to you an early publication of mine on Value. At the time of the publication, in 1881, I was a young teacher in one of our western colleges; and I actually thought that I was the original discoverer of the principles expressed in the article. The analysis was written quite a long time before it was published.

Yours very truly,

J. B. CLARK.

Herrn Dr. Robert Zuckerkandl,
Vienna.

P.S.—Nothing gives me greater pleasure than to render full honour to the eminent thinkers, mainly Austrians, who were earlier in this field than myself, and who have carried their analysis to greater lengths."

It may be added, perhaps, that in spite of the well-known lively controversy on the theory of capital, personal relations between J. B. Clark and the Austrians, when at last they were established just before the war, were most cordial, and that at least some of the members of the second or third generation of the "Austrian School" owed nearly as much to the teaching of J. B. Clark as to their immediate teachers.

F. A. HAYEK.

Die Berechnungen über die künftige deutsche Bevölkerungsentwicklung. By P. J. Deneffe. (Frankfurter Wirtschaftswissenschaftliche Studien.) Leipzig: Hans Buske. 1938. 175 pp. RM. 5.25.

This is a very sober and serious study which should be read by everyone interested in population forecasts. Mr. Deneffe loathes charlatanism and refutes estimates based on the assumption that the population of a country will grow according to a logistic curve. He analyses carefully the computations or estimates of the future German population made by the German Statistical Office in 1926, 1930 and 1937, by Ernst Kahn in 1930–1931, by Friedrich Hage in 1931, by Bonz and Hilburg in 1931, and by Ernst Günther in 1935. He considers the work of Bonz and Hilburg the best of all owing to the "methodical cleanliness" of their computations. A particularly welcome feature of Mr. Deneffe's book is that he takes the greatest pains to show where the various authors failed to state exactly how they arrived at their results. It is very much to be hoped that his criticism will induce the German Statistical Office to improve its publications in this respect.

Mr. Deneffe makes a sharp distinction between "diagnosis" and "prognosis", that is, as he understands it, between computations of the future population based on the assumption that fertility and mortality will remain what they are and between computations based on what fertility and mortality are likely to be. This distinction is certainly useful. But it is, I think, not the decisive one. It seems more important to distinguish between computations which show merely what will be the population on certain definite assumptions and between population estimates or forecasts. If A believes that fertility and mortality will remain in England what they are now (or will both decrease to the same extent) and thereupon forecasts the population of England in 1975 he does essentially the same thing as B who bases his forecast on the assumption that fertility will decrease by another 25 per cent. and mortality by only 10 per cent. Similarly, C who merely computes what would be the population of England in 1975 if fertility and mortality remain constant does essentially the same thing as D who makes a similar computation on the assumption that fertility will decrease by 25 per cent. and mortality by 10 per cent. Mr. Deneffe is absolutely right in distinguishing between diagnosis and prognosis. But the difference lies exclusively in the object of the computation and not in the arithmetical assumptions.

R. R. Kuczynski.

Full Recovery or Stagnation? By Alvin H. Hansen. Black, London. 1938. 350 pp. 15s.

This excellent volume should be welcomed by all. The theorists will like it because Professor Hansen understands their analysis, presents it in a clear and readable form, and criticises it with fairness and sympathy. The practical men will like it because he keeps his feet firmly on the ground, checking assumptions by statistics and never hesitating to puncture balloons of elegant formulæ with nasty little facts.

A considerable part of the book is quite new, but much of it has already appeared in print as articles or reviews. The material is arranged in four parts.

Part 1 includes a brief "Keynes without tears," highly recommended to students, an exposure of the Douglas schemes, an account of how Professor Hayek took the wrong turning, and a gentle but firm "debunking" of Mr. Harrod. Whilst very sympathetic with the views, although not the terminology, of Mr. Keynes (whom he describes as "one of those phenomena in our current age which help to make life worth living") he agrees with Professor Hayek that "it is wholly fallacious to assume that a government can safely rely, in a private capitalist economy, upon spending its way out of depression to a sustained recovery," and a chapter towards the close of this book shows conclusively that "pump-priming" has failed in the United States. On the other hand, he rejects with horror the neutral money policy advocated by Professor Hayek. Owing to frictions, "such a policy would almost certainly cause maladjustments in the price structure, since in many industries it would force prices below costs" and might well be disastrous: witness the history of prices in the United States from 1873 to 1896, when wholesale prices fell 2.9 per cent. per annum, and there were "depressions of extraordinary severity and duration". Mr. Harrod annoyed our author by his "many sweeping and unsupported generalisations" and by promising a "precise and definite diagnosis" of the trade cycle and then failing to deliver the goods. "I can find only one new tool in Harrod's kit-bag," he concludes. "It is the law of diminishing elasticity of demand". And this, he might have added, is less use than a paper chisel.

Part 2 is possibly the best in the book. It is an acute study of the flow of purchasing power, of the dangers of building up dividend reserves in good times, and of the possible uses to which Unemployment Fund and similar reserves should be put. He concludes that these reserves should be invested in bonds purchased and sold in the open market, and quite rightly characterises the proposal to hoard them in gold as an infantile absurdity.

Part 3 deals with the international monetary situation. Like the rest of the book, it is full of sound sense, culminating in a forceful plea for lower tariffs.

Readers will probably find the last part the most interesting. It deals with recent events, especially in the United States, and with the economic outlook. It shows that during recent years business investment of capital has cautiously followed consumers' expenditure, and explains why unemployment and fear of inflation can and do exist side by side.

I am surprised that Professor Hansen has not revived a proposal once made by Professor Pigou: a minimum income for all. Again and again he seems on the verge of doing so. The proposal is a very bold one, but the scheme, by replacing unemployment and other assistance, would overcome many frictions and solve many difficulties. The taxation required could come mainly from increased income tax, including a tax on wages and salaries. Even low wages and salaries are taxed 30 per cent. in Turkey, and what Turkey can do to-day America or Britain could surely do to-morrow.

FREDERIC BENHAM.

The Central Problem of Indian Economy. By PROFESSOR P. J. THOMAS. Presidential Address, Indian Economic Conference, Hyderabad, 28th December, 1937. 35 pp.

In this short pamphlet Professor Thomas attempts to explain why there has been no (or no substantial) improvement in the standard of life in India, and to suggest a programme of reform. It was obviously impossible for him to treat the subject fully in the course of a short address, but he makes a number of stimulating suggestions, each of which might form the subject of protracted discussion.

His main explanation of the continuance of an extremely low standard of life, despite the economic revolution that has occurred since the early 19th century, is that the benefits of this revolution have accrued not to the masses (and in particular not to the agriculturists) but only to the small sections of the population—i.e., to landlords, merchants, moneylenders and middlemen. Whereas, in the West, similar developments led to far-reaching capital investments, which increased and cheapened production and hence eventually enabled the masses to obtain a share in the increased national income, in India (he argues) this has not occurred, owing to the tendencies to invest savings "unproductively"—i.e., mainly in the purchase of land or in money-lending—and to hoard. According to this thesis India is an outstanding example of "underconsumption," and improvement can only be effected by drastic changes in the distribution of wealth and economic opportunities. But Professor Thomas does not pursue this theme consistently. He later asserts that whereas Western nations have predominantly solved the problem of production, and are faced mainly with the problem of a better distribution of wealth, in India the central problem is still that of production! Moreover, whilst urging the fundamental need for increased output per head, he maintains stoutly that there is no "menace of over-population," but that population growth is a source of economic strength to India, and "our duty is not to control births, but to increase the health and productive efficiency of our population and thus utilise our labour force fully".

Much more space than that here at his disposal would be necessary to enable Professor Thomas to reconcile his apparent inconsistencies, and to convince the reader that there is no " population problem " in India. There is, however, much truth in his separate analyses of the problems of production and distribution in India. He puts his finger on many a weak spot in Indian economy, and his comments and suggestions for reform are worthy of serious consideration. What he has not succeeded in doing is to explain clearly why India has reacted differently from the West to modern economic developments, and—in particular—why increased productive capacity has failed so lamentably to induce any substantial rise in the standard of life. Personally I cannot avoid thinking that the clue is to be found in that very " menace of overpopulation " which he denies. In conclusion, it may be asked whether it is correct to describe the present economic policy of the Government of India as " the continuance of *laissez-faire* " ? and whether it is fair—whatever the faults and defects of the policy pursued—to insinuate that Government has done nothing to solve India's fundamental economic problem, when it is the Government that has undertaken large capital investments in such things as railways, irrigation and scientific research, whereas by Professor Thomas' own showing, Indian capitalists have, in the main, failed to undertake productive investment.

Vera Anstey.

Commodity Flow and Capital Formation. Volume I. By Simon Kuznets. National Bureau of Economic Research. 1938. 505 pp. 21s.

" Coming events cast their shadows before." This volume of over 500 pages, 8¼ in. by 11¾ in., is one of several events preceded by the shadow (86 pages) of the preliminary report, *National Income and Capital Formation, 1919–1935.* Figures and their derivation are given in this Volume I, but little on definitions, scope and results, which will be discussed in greater detail in Volume II.

The study gives estimates of part of the gross national income of the United States from 1919 to 1935 inclusive at prices in the year concerned and adjusted to the basis of prices as they were in 1929. Dr. Kuznets undertakes all his measurements from the side of production and measures only tangible commodities, adding however to the form utilities produced by the manufacturers the place and time utilities produced by the distributors, an addition rendered fairly reliable for the United States by their Census of Distribution. Entirely omitted are services rendered directly to consumers which amount to about 25 per cent. of the gross national product in normal times. In the years following 1929 the fall in the flow of such services was much less than the fall in the gross flow of commodities so that in the years 1931, 1932 and 1933 slightly over 30 per cent. of the gross national product consisted of services rendered directly to consumers. Also omitted is the production of intangible assets such as goodwill, although they may be obtained at great money cost through advertising.

The gross production of commodities is considered; it is a more definite concept than the net production which must allow for the gradual wear and tear of durable goods produced in the past. The nature of depreciation is of a character which must involve tentative opinions and judgments and this problem of " Capital Consumption " is being dealt with in an independent study, another " event ", by Mr. Fabricant. Final results of this independent study are available and have been incorporated in the summary of Dr. Kuznets' volume. These estimates of capital consumption exceed the estimates of gross capital formation for each of the years from 1931 to 1934 inclusive, whilst for 1935 there is a net capital formation when expressed in 1935 prices, but a net capital consumption when expressed in terms of 1929 prices. This curious result obtained after adjustment for changes in claims against foreign countries shows a difficulty of applying index numbers when relative prices and relative quantities are changed.

Most economists consider net to be more fundamental than gross capital production and thereby tacitly assume that with no net investment in a community there will be no saving. In fact saving is necessary to maintain capital intact. An individual or firm is not compelled to renew an article of furniture or a machine as it wears out, a decision has to be made. I have long felt that for many purposes gross capital formation is a more fundamental as well as a more easily measured concept. Inertia means allowing capital to depreciate; decision, activity and production are needed to maintain it intact. It hardly seems legitimate to speak of negative production of capital when positive replacements have been made, negative production of capital suggests active destruction such as occurs in war or riots. It is gross capital formation which creates employment; to the producer and his employee it is immaterial whether the new settee is a replacement or an additional commodity.

There are two ways of measuring the production of commodities: one can sum the values added by each entrepreneur or one can ignore all production until a finished commodity results and then count the whole value of the finished commodity. The former method causes difficulties when one attempts to correct the value of production for changes which are due purely to changes of price; the latter method, utilised by Dr. Kuznets, creates the difficulty of determining which commodities are finished and of certain commodities what proportion is finished. For instance, most sugar is finished but much is a raw material for the confectionery industry. When adjustment has been made for the few commodities which reach the ultimate consumer without passing through a manufacturing process an estimate is made of the total flow of finished commodities, whilst adjustment for exports and imports gives the flow to ultimate consumers in the United States.

Gross capital formation is obtained by measuring only those commodities classed as durable, including or excluding consumers' durable goods according to the definition utilised, and by making allowance for changes in stocks, in goods in process of manufacture, and in claims against foreign countries.

The basic year for all the estimates is 1929, when statistics were particularly complete in the United States, including not only the figures from the biennial Census of Manufactures, but also from Censuses of Distribution and Construction. It is usual in a review to be published in the United Kingdom to point out the completeness of United States statistics. The position there with regard to distribution is similar to the position here with regard to production, whilst we have not yet started with a Census of Distribution. Yet there are many gaps in the United States records, particularly regarding construction which had for most years to be estimated with the help of information from the Census of Manufactures of the output of construction materials, whilst information about changes in stock and of goods in process is very incomplete.

Adjustment of the figures for price changes causes many difficulties. From any Census of Manufactures information of the number and value of shoes produced enables one to find an average value or price. A decrease in average price might mean that shoes have become cheaper, but alternatively it might only mean that a greater proportion of poor quality shoes are being produced. Therefore the above method has been rejected and the price quotations of the Bureau of Labour Statistics used as these relate to articles of unchanged quality. Even this method might be unsatisfactory—in extreme cases one might be measuring price changes in terms of a commodity which has become obsolete or unpopular.

H. S. BOOKER.

Essai sur la Conjoncture et la Prévision Économiques. By ALFRED SAUVY. Document 8. Cycle 1937–1938. Centre Polytechnicien d'Etudes Economiques. 1938. 190 pp. 18 francs.

This essay is an account of the work of the professional "conjuncturist" or trade cycle observer and a plea for the promotion of his activities. M. Alfred Sauvy is the head of the Economic Observation Service at the Economie Nationale. He is thus in an unequalled position for the observation not only of the business activity of his country, but also of the minds of those who shape its policy. For the ills of France he prescribes knowledge; in this context, however, not knowledge of grand principles but knowledge of the facts of its economic system. He has clearly undertaken the writing of this excellent essay as of a testament and a justification of existence for his profession.

The opening chapters, in which appear a résumé of the development of trade cycle studies in France and some notes concerning the principal institutes in other countries, serve only to show how slender an organisation the world is content to have report upon its business. The greater part of the essay is an exposition of the technique of the economic observer. It is admirable in almost every respect. First M. Sauvy sets out the statistical series available in France, together with a full but not querulous criticism of their failings. British statisticians may congratulate themselves that there is at least one important country where official statistics are more ill-coordinated than in Britain. Then he gives a simple and clear account, which is marred only by some ill-drawn charts, of the main statistical methods used in the manipulation of the series. Finally, in text-book manner, he works out an example, showing that the decline in French business activity between 1929–30 and 1935, which appeared to be about one-third, was really no more than about one-fifth. For the layman who wishes to understand the elementary statistical treatment of economic time series, this section of the essay would make an excellent primer.

Most readers, however, will be interested mainly in M. Sauvy's views on the problems of forecasting and on the value of the work of the conjuncturist for the formation of public policy. M. Sauvy presses high claims for what he believes is a science. However, he appears to be writing principally for the layman and he is therefore concerned mainly to explain the need for ordered knowledge and for freedom from interested influences, political, commercial or ideological. This task he performs with great persuasiveness and throughout he exhibits high purpose and lets fall many wise observations.

But for those who are already persuaded, he does not provide satisfactory answers to the two questions which he poses. First, is it possible to build a forecasting system on the basis of the statistical record of the past ? Secondly, in what way would the work of an economic observatory, fully equipped, manned by the best economists of the day, and free from political control, influence public policy ? Concerning the first question, M. Sauvy seems to be unduly influenced by the experience of the French trade cycle, which, fortunately for the forecaster, has hitherto shown a distinct lag behind the British. For most other conjuncturists the answer is likely for a long time to be little better than a qualified negative. Concerning the second question, he states that we are moving to a new and better (i.e., planned) economy and that we cannot plan without knowledge. But not even the knowledge of all possibly relevant facts can save a planned economy which is planned only because the people, under the influence of economic fallacies, desire incompatible ends. New Dealers would remain New Dealers even if their brain trusts had better statistical material to work on than they now have—as M. Sauvy at the Economie Nationale might perhaps have discovered.

Nevertheless, it would be difficult to overestimate the long-term value of the work that might be done by authoritative research institutes. It is only necessary not to expect them to pay quick dividends in the form of improvement of public opinion. Statesmen might soon contract the habit of consulting experts, and this would be very valuable. But the multitude would still be swayed by those who would ignore or misuse the studies produced by the institutes. For a long time these studies must mainly be aimed at the testing and refinement and, possibly, the reconciliation of the opinions of professional economists (the Haberler—Tinbergen studies are an obvious example). But the time-lag between the opinions of economists and the opinions of the public is not negligible.

A. SHEINFIELD.

Trade Revival in a Depressed Area. By D. CARADOG JONES. The University Press of Liverpool. 1937. 72 pp. 2s. 6d.

This book is essentially a continuation of certain sections of the *Social Survey of Merseyside*. It is divided into two parts, one relating to trade (which considers the period up to 1935) and the other to employment (which goes up to 1936). The section dealing with trade starts with a presentation of the facts relating to world trade, then considers the trade of the United Kingdom. Finally there is a detailed analysis of the trade of Liverpool. An interesting feature of the section on employment is the comparison between the actual figures and what the figures would have been if (starting from the 1929 position) employment and unemployment had increased in the same proportion as the insured population of Great Britain. The fact that employment in the distributive trades rose in the depression and fell with recovery is emphasised but reasons other than those advanced by Mr. Caradog Jones could be put forward to explain this movement.

The whole book is extremely clearly written. As Mr. Caradog Jones says, although the analysis is entirely statistical, " no trouble has been spared to make the tables as simple and illuminating as possible and the subject matter has been broken up into short chapters in the hope that readers may be persuaded to follow the figures as well as the text."

R. H. COASE.

Danubian Destiny. By GRAHAM HUTTON. London: Harrap. 1939. 254 pp. 7s. 6d.

Bismarck once said: " Whoever is master of Bohemia is master of Europe ". Is this true to-day? The present volume attempts to answer this question by discussing the political, military, racial, and economic problems arising out of recent events in Central and South East Europe. Mr. Graham Hutton is a master of his subject and writes vividly.

Britain in Recovery. Prepared by a Research Committee of the Economic Science and Statistics Section of the British Association. London: Pitman. 1938. xvi + 474 pp. 15s.

This is a companion volume, or sequel, to *Britain in Depression*, which the same Committee produced in 1935. Mr. G. D. A. MacDougall gives a masterly survey of the whole period 1929–37; my only criticism is that he does not bring out sufficiently the great increase in output per person engaged in manufacturing over this period. There are essays on employment and unemployment, the effects of recovery on the various regions, industrial relations, protection, and the foreign exchanges, whilst Part II traces the fortunes of fourteen separate industries (including crops, milk and livestock). Altogether some twenty different experts have contributed.

The book is packed with useful facts and statistics and is a mine of information. Unpleasant questions such as the non-transferability of coal quotas between districts, the price policy of the British Iron and Steel Federation, and the road-rail controversy, are not discussed. The only jarring note is struck by Professor N. F. Hall, who has the bad taste to argue, with a certain misplaced brilliance, that our exchange policy has not been very successful—we forced deflation on the gold bloc, and where are the dollar and the franc to-day?

Frederic Benham.

Wage Policy in Relation to Industrial Fluctuations. By A. G. Pool. Macmillan. 1938. 305 pp. 12s. 6d.

A book on this subject was badly needed. Up to a few years ago, it was not possible to say anything sensible about wage policy and trade fluctuation; in hardly any respect were the older theories of the cycle so lamentably insufficient as in their inability to say anything useful about the effect of wage policy upon the activity of trade in the short run. To-day the position is different; we know broadly what ought to be said, and though of course there are minor differences of opinion, it is beginning to be possible to state the new view without more than the usual margin of disagreement. At this stage the time is ripe for the new theory of wage-policy to be set down in text-books and recorded for the use of students. That is what Mr. Pool has tried to do; how far has he succeeded?

His book is in two parts: one part is devoted to theoretical issues, the other to a critical discussion of the main methods of wage-fixation, sliding scales and so on. This latter is, of course, a well-worked field, since, however much the theory of wages has developed in recent years, the practice of wage-fixing has been barren of ideas since the early twenties. Still there can be no doubt that Mr. Pool has done the job very well; he gives a very balanced account, and has his eye open for most sorts of economic implication. This part of the book will certainly be found very useful.

Part I will be useful too, though it is a little less successful. Mr. Pool has mastered the one central principle which does emerge from the new theoretical work—that general changes in the level of wages are unlikely to have any useful effects on production and employment, while they may lead to enhanced instability by causing unnecessary fluctuations of prices. Consequently wage policy ought to aim at a steady wage-level, though this is only a negative prescription against fluctuation. Positive measures must be sought on other lines.

Nevertheless, although Mr. Pool has reached this central truth, I am afraid it cannot be said that he has laid hold of it very securely. He arrives at it through an analysis of the work of Mr. Keynes; but he does not give the impression that he is wholly convinced by Mr. Keynes, since he still finds it necessary to go through "the psychological theories", "the additional-credit theory", and so on, in the usual perfunctory manner. Indeed I do not think that anyone has any business to be convinced by the Keynes arguments *as they are given here*. Mr. Pool merely takes it for granted from Mr. Keynes that employment is determined by the Marginal Efficiency of Capital, Liquidity Preference and the Multiplier; he shows how these work, but he never explains why they exhaust the list. (It must be admitted that Mr. Keynes was not at all kind to him on this point.) However, one is left with the suspicion that with this step in the argument missing, the author himself did not find it altogether convincing. This is a pity, because he gets let down as a result in some important applications.

He is inclined, for example, to accept much too readily the old contention of Professor Clay that a reduction of wages in relatively prosperous trades towards the level existing in depressed trades would assist transfer by creating jobs in the prosperous trades. This is valid, within a single country, if the level of its foreign exchange rate is taken as given. But if it is not taken as given, then a reduction of wages in the prosperous trades is no more likely to create jobs on balance, than a rise in wages in the depressed trades (together with the appropriate exchange adjustment) would do. It does not appear that this would have any useful effect on the demand side, or at least a sufficient effect to counterbalance the admittedly reduced incentive to movement caused by the diminished disparity. The reason why wages have remained low in the depressed trades ever since 1920 is surely to be found in the simple fact that transfer has never been sufficient to create a shortage of labour in those trades, or even to put their Unions in a strong bargaining position.

Another error, which seems to spring from much the same root, is in practice even more serious. Mr. Pool is inclined to give good marks to the principle of adjusting wages by cost-of-living scales, at least in times of inflation. Surely it should be—above all not in times of inflation! Inflation comes about nowadays, not because the monetary authority is operating the printing press for the love of it, but because Government expenditure is running far ahead of what the government dares to raise by taxation, or to cover by any other overt reduction of real incomes. Either expenditure must be curtailed, or real incomes reduced; inflation occurs because the government is unwilling to face the dilemma, but it does not solve the dilemma, even temporarily, except in so far as the inflation operates as a concealed reduction of real income. Now cost-of-living scales are directed to prevent that from happening; and therefore, in the conditions under which inflation usually arises, they are a sovereign means of accelerating the inflation, of forcing it out of hand. If there is some special class of labour which has a claim to special protection (munition workers for example) cost-of-living scales may be a suitable privilege for that class; but it is a privilege which cannot be generalised, or it ceases to be a privilege at all.

These are the main criticisms I have to make. They do not prevent the book from being quite good and useful on the whole.

J. R. Hicks.

Recent Important Foreign Books on Economics

The Librarian of the British Library of Political and Economic Science has made arrangements, as a supplementary check to the purchases of the Library, to receive regularly every quarter from competent foreign scholars lists of the most important books in their respective fields of study published in their own countries (or languages as the case may be) during the preceding three months. It appeared to the Editorial Board of Economica that these lists might prove useful to other institutions, and the lists of books on economics will therefore be published regularly in future issues of Economica. It must be understood, however, that the Editorial Board of Economica accepts no responsibility for the selection of the books included in the list.

AMERICAN BOOKS

(Selected by Professor H. D. Gideonse)

Barnard, Chester Irving: *The Functions of the Executive.* Cambridge, Mass. xvi, 334 pp.

Clark, John Maurice: *Social Control of Business.* 2nd Edition. New York. xviii, 483 pp.

FRENCH BOOKS

(Selected by M. Robert Marjolin)

Antonelli, Étienne: *L'Économie Pure Capitaliste.* Paris.

Bettelheim, Charles: *La Panification Soviétique.* Paris.

GERMAN BOOKS

Friedensburg, F.: *Die Bergwirtschaft der Erde.* Stuttgart. 1938. xiv, 507 pp.

Lampe, A.: *Allgemeine Wehrwirtschaftslehre.* Jena. 1938. xx, 196 pp.

Sapper, K.: *Die Ernährungswirtschaft der Erde und ihre Zukunftsaussichten für die Menschheit.* Stuttgart. 1938.

ITALIAN BOOKS

(Selected by Professor Luigi Einaudi)

Battaglia, F., and Bertolino, A.: *Problemi Metodologici nella Storia delle Dottrine Politiche ed Economiche.* Rome. 207 pp.

Graziadei, Antonio: *Il Risparmio e l'Interesse nella Grande Industria Bancaria.* Milan. xi, 314 pp.

Palomba, Giuseppe: *Lineamenti Teorici di Politica Bancaria Classica e Contemporanea.* Naples. vii, 136 pp.

Pantaleoni, Maffeo: *Studi di Finanza e di Statistica.* Bologna. x, 362 pp.

Verri, Pietro: *Considerazioni sul commercio dello Stato di Milano; a cura di C. A. Vianello.* Milan. xxi, 234 pp.

Books Received

ADARKA, B. P.: *The Indian Monetary Policy.* Kitabistan. 1939. xiii, 112 pp. 2s. 6d.

ANASTASSIADES, P. L.: *Economic Atlas of Greece.* 1938. 32 pp.

ANDERSON, M. D.: *Dynamic Theory of Wealth Distribution.* University of Florida Press. 1938. x, 243 pp.

BARFORD, B.: *Local Economic Effects of a Large-Scale Industrial Undertaking.* Einar Munksgaard, Copenhagen. Oxford University Press. 1938. 74 pp.

BERNONVILLE, L. D. DE: *Initiation à l'analyse statistique d'economie politique contemporaine.* Vol. XIX. Librairie Generale de Droit et de Jurisprudence, etc. 1939. 230 pp. 50 fr.

BILJON, F. J. VAN: *State Interference in South Africa.* P. S. King & Son, Ltd. 1939. ix, 322 pp. 15s.

BOARD OF TRADE: *Statistical Abstract for the United Kingdom for each of the fifteen years 1913 and 1924 to 1937.* H.M.S.O. 1939. xvii, 453 pp. 7s. 6d.

BOMBAY (PRESIDENCY). LABOUR OFFICE: *General Wage Census.* Part II. Seasonal Factories. Government Central Press, Bombay. 1939. 88 pp. Annas 5 or 6d.

BOPP, K. R.: *Hjalmar Schacht: Central Banker.* The University of Missouri Studies. Vol. XIV. January, 1939. No. 1. 1939. 91 pp. $1.25.

BOWLEY, A. L.: *The Average and the Individual.* Barnett House Papers No. 22. Oxford University Press. 1939. 20 pp. 1s. 0d.

BRAATOY, B.: *The New Sweden.* Discussion Books No. 18. Thomas Nelson & Sons, Ltd. 1939. vi, 172 pp. 2s.

BRAUN, G. W.: *Technik und Folgen der Devaluation.* Verlag Konkordia A. G. Bühl-Baden. 1938. viii, 271 pp.

BROWN, R. N. R.: *The Principles of Economic Geography.* Sir Isaac Pitman & Sons, Ltd. 1939. xv, 208, 8 pp. 6s.

BUROS, K., Ed.: *Research and Statistical Methodology.* Books and Reviews, 1933–1938. Rutgers University Press, New Jersey. 1938. vi, 100 pp. $1.25.

BUTLER, H. B.: *The Economic Factor in International Affairs.* Manchester University Press. 1939. 36 pp.

CAMPION, H.: *Public and Private Property in Great Britain.* Oxford University Press. 1939. xvii, 137 pp. 8s. 6d.

Chronology of Political and Economic Events in the Danube Basin 1918–1936. Hungary. International Institution of Intellectual Co-operation. 1938. 86 pp.

CONFÉRENCE PERMANENTE DES HAUTES ETUDES INTERNATIONALES. *Autriche.* Institut international de cooperation intellectuelle. Societe des Nations. Paris. 1938. 178 pp.

CONFERENCE ON PRICE RESEARCH: *Report of the Committee on Prices in the Bituminous Coal Industry.* National Bureau of Economic Research, New York. 1938. xiii, 144 pp.

CONFERENCE ON RESEARCH IN NATIONAL INCOME AND WEALTH: *Studies in Income and Wealth.* Vol. II. National Bureau of Economic Research, New York. 1938. xii, 328 pp. 14s.

COON, H.: *Money to Burn.* Longmans, Green and Co. Ltd. 1939. 352 pp. 15s.

DAVIS, J. S.: *On Agricultural Policy, 1926–1938.* Food Research Institute. California. 1938. viii, 494 pp. $3.00.

DEUTSCHER VEREIN FÜR VERSICHERUNGS-WISSENSCHAFT IN BERLIN: *Kernfragen der Versicherungs-Rechtsprechung.* E. S. Mittler & Sohn, Berlin. 1938. 136 pp.

DRESCHER, L.: *Entschuldung der ostdeutschen Landwirtschaft.* Berlin. 1938. xviii, 96 pp.

DURBIN, E. F. M., and BOWLBY, J.: *Personal Aggressiveness and War.* Kegan Paul, Trench, Trubner & Co., Ltd. 1939. viii, 154 pp. 5s.

ELLSWORTH, P. T.: *International Economics.* The Macmillan Company, New York. 1938. xiii, 529 pp. 18s.

FABRICANT, S.: *Capital Consumption and Adjustment.* National Bureau of Economic Research, New York. Macmillan & Co., Ltd. 1938. xx, 271 pp. 12s.

FANFANI, A.: *Storia delle Dottrine Economiche.* Cavalleri, Como. 1939. 212 pp.

FOSTER, W. J., and TAYLOR, F. G.: *National Health Insurance.* Sir Isaac Pitman & Sons, Ltd. 1938. xv, 288 pp. 10s. 6d.

FRANKEL, S. H.: *Capital Investment in Africa: Its Course and Effects.* Oxford University Press. 1938. xvi, 487 pp. 10s. 6d.

GARRIGOU-LAGRANGE, A.: *Production agricole et economie rurale.* L'economie Politique Contemporaine. Lib. Générale de Droit et de Jurisprudence. 1939. 211 pp. 40 fr.

GAYER, A. D., HOMAN, P. T., EARLE, K. J.: *The Sugar Economy of Puerto Rico.* Columbia University Press. 1938. xviii, 326 pp. 18s. 6d.

GILBERT, R. V., etc.: *An Economic Program for American Democracy.* Vanguard Press, New York. 1938. ix, 91 pp. $1.00.

GOODFELLOW, D. M.: *Principles of Economic Sociology.* George Routledge & Sons, Ltd. 1939. xx, 289 pp. 12s. 6d.

GUILLEBAUD, C. W.: *The Economic Recovery of Germany.* Macmillan & Co., Ltd. 1939. xiv, 303 pp. 10s. 6d.

HAENSEL, P.: *The Public Finance of the Union of Soviet Socialist Republics.* The Tax Magazine, U.S.A. 1938. 39 pp.

HARROD, R. F.: *International Economics.* The Cambridge Economic Handbooks. Nisbet & Co., Ltd. Cambridge University Press. 1939. xii, 207 pp. 5s.

Heichelheim, F. M.: *Wirtschaftsgeschichte des Altertums.* Vols. I and II. A. W. Sijthoff's Uitgeversmaatschappij N.V. Leiden. 1938. xiii, 1239 pp. Cloth 52.0 gulden. Paper 49.0 gulden.

Heilperin, M. A.: *International Monetary Economics.* Longmans, Green & Co. 1939. xiv, 281 pp. 15s.

Heilperin, M. A.: *The Monetary Aspect of the Raw Materials Problem and the Revival of International Trade.* International Institute of Intellectual Co-operation. League of Nations. 1938. 41 pp.

Henderson, W. O.: *The Zollverein.* 1939. xi, 375 pp. 18s.

Heuser, H.: *Control of International Trade.* George Routledge & Sons, Ltd. 1939. x, 282 pp. 12s. 6d.

Hicks, J. R.: *Value and Capital.* The Clarendon Press. 1939. xi, 331 pp. 12s. 6d.

Hiskett, W. R., and Franklin, J. A.: *Searchlight on Social Credit.* P. S. King & Son, Ltd. 1939. x, 173 pp. 8s. 6d.

Hodson, H. V.: *The British Commonwealth and the Future.* Oxford University Press. 1939. xvi, 336 pp. 8s. 6d.

Horace Plunkett Foundation (Ed.): *Year Book of Agricultural Co-operation.* P. S. King & Son, Ltd. 1939. vii, 558 pp. 15s.

Hotchkiss, G. B.: *Milestones of Marketing.* Macmillan & Co., Ltd. 1938. xvi, 305 pp. 10s. 6d.

Indian Cotton Review, 1937–38. Chunilal Mehta & Co. Ltd. Bombay. 1938. 30 pp.

Innes, J. W.: *Class Fertility Trends in England and Wales, 1876–1934.* Princeton University Press. 1938. xiii, 152 pp. $2.50.

International Bibliography of Agricultural Economics. Institut International D'Agriculture. Rome. 1938. x, 137 pp.

International Labour Office: *Labour Conditions in Indo-China. Studies and Reports.* Series B (Economic Conditions), No. 26. P. S. King & Son, Ltd. 1938. vii, 331 pp. 7s. 6d. $2.00.

International Studies Conference: *Peaceful Change.* International Institute of Intellectual Co-operation, Paris. 1939. 685 pp.

Jaffin, G. H.: *Les modes d'introduction du controle judiciaire de la constitutionnalité des lois aux États-unis.* Extrait du " Recueil d'Etudes en l'honneur d'Edouard Lambert ". 1938. pp. 257–269.

John Bates Clark. A Memorial. Columbia University, New York. 1938. 40 pp.

Kalecki, M.: *Essays in the Theory of Economic Fluctuations.* George Allen and Unwin. 1939. 154 pp. 6s.

Kelsall, R. K.: *Wage Regulation under the Statute of Artificers.* Methuen & Co., Ltd. 1938. xii, 132 pp. 7s. 6d.

Kevin, J. C. S.: *Some Australians Take Stock.* Longmans, Green and Company Ltd. 1939. ix, 241 pp. 10s.

Knight, A. W.: *What's Wrong with the Economic System?* Longmans, Green and Company Ltd. 1939. xi, 179 pp. 8s. 6d.

Kulp, C. A.: *Social Insurance Co-ordination.* Committee on Social Security. Social Science Research Council, New York. 1938. xiv, 333 pp. $2.50.

Laufenburger, H.: *L'intervention de l'état.* Librairie generale de Droit et de Jurisprudence, Paris. 1939. 371 pp. 70 fr.

Lower, A. R. M.: *The North American Assault on the Canadian Forest.* The Ryerson Press, Yale University Press. Oxford University Press. 1939. xxvii, 377 pp. 16s.

Macgregor, D. H.: *Public Aspects of Finance.* Oxford University Press. 1939. 137 pp. 5s.

Macmillan, H.: *Economic Aspects of Defence.* Macmillan and Co., Ltd. 1939. 67 pp. 1s.

Mahalanobis, P. C., Ed.: *Proceedings of the First Session of the Indian Statistical Conference.* Statistical Publishing Society, Calcutta. P. S. King & Son, Ltd. 1938. iv, 311 pp.

Milhau, J.: *Prix et production en agriculture.* Librairie du Recueil Sirey, Paris. 1938. xiii, 76 pp.

Mises, R. v.: *Probability, Statistics and Truth.* William Hodge & Company, Ltd. 1939. xvi, 323 pp. 12s. 6d.

Moore, W. G.: *The Geography of Capitalism.* Victor Gollancz, Ltd. 1938. 96 pp. 1s. 6d.

Mosca, G.: *The Ruling Class.* McGraw-Hill Publishing Company, Ltd. 1939. xli, 514 pp. 25s.

Mosse, R.: *L'économie collectiviste.* L'économie Politique Contemporaine. Librairie générale de Droit et de Jurisprudence. 1939. 210 pp. 40 fr.

Mukerjee, R. (Ed.): *Economic Problems of Modern India.* Vol. I. Macmillan & Co., Ltd. 1939. xix, 443 pp. 10s. 6d.

Naleche, E. de: *Les techniques au service de la pensée.* Librairie Felix Alcan, Paris. 1938. 263 pp. 18 fr.

Nogaro, B.: *La méthode de l'économie politique.* L'Economie Politique Contemporaine. Vol. I. Librairie Générale de Droit et de Jurisprudence, Paris. 1939. vi, 272 pp.

Palmer, R.: *Science and World Resources.* Fact 21. 1938. 96 pp. 6d.

Palumbo, P.: *Riserve. Nelle aziende di Produzione.* F. Ciuni Libraio Editorie, Palermo. 1936. 211 pp.

Plummer, A.: *International Combines in Modern Industry.* Sir Isaac Pitman & Sons, Ltd. 1938. ix, 302 pp. 10s. 6d.

Proceedings of the Fifth International Conference of Agricultural Economists. Oxford University Press. 1939. xi, 436 pp. 17s. 6d.

Rao, V. K. R. V.: *India's National Income, 1925–29.* George Allen & Unwin, Ltd. 1939. 173 pp. 6s.

Report on the Location of Industry. Political and Economic Planning. 1939. 303 pp. 10s. 6d.

Robbins, L., etc.: *Cinq conférences sur la méthode dans les recherches économiques.* Librairie du Recueil Sirey, Paris. 1938. 106 pp.

VALUE AND CAPITAL

by J. R. HICKS 12/6 net

"... This book is the most important original contribution to pure economics since Mr. Keynes's *General Theory of Employment, Interest and Money* ..." *Spectator*

MODERN BANKING

by

R. S. SAYERS

12/6 net

" .. This is by far the best book on the theoretical aspects of banking that has appeared for some time . ." *Banker*

PUBLIC ASPECTS OF FINANCE

by

D. H. MacGREGOR

5/- net

This book deals with certain aspects of national finance which have been more prominent in public than in academic discussion, such as the relation of expenditure to policy, the doctrine of fructification, and the doctrine of emergency, or reserve, finance

PUBLIC and PRIVATE PROPERTY in GREAT BRITAIN

by

H. CAMPION

8/6 net

" . . Further evidence of the vitality and realism of the new 'Manchester School' . . This valuable book . ."

Manchester Guardian

THE TRADE CYCLE

by

R. F. HARROD

10/- net

" This book is a very important contribution to the discussion on the trade cycle . . . Mr. Harrod is a subtle and penetrating thinker . . . "

Times Literary Supplement

THE FINANCE OF BRITISH GOVERNMENT, 1920–1936

by

URSULA HICKS

15/- net

". . . likely to remain the standard work on the subject for some considerable time . . . "

Economic Journal

" . . . deserves to be read, needs to be read, and will be read, by all serious students . . . "

Spectator

THE ECONOMICS OF SOCIALISM

by

H. D. DICKINSON

8/6 net

This book sets out to investigate in the light of modern economic theory the fundamental problems involved in the organization of human productive activity in a society based upon the twin postulates of economic freedom and economic equality

(*Shortly*)

OXFORD UNIVERSITY PRESS

Ross, J. A.: *Speculation, Stock Prices and Industrial Fluctuations.* The Ronald Press Company, New York. 1938. xvi, 426 pp. $4.50.

Schaffer, G.: *Riches and Poverty.* Victor Gollancz, Ltd. 1939. 95 pp. 1s. 6d.

Smellie, K. B.: *Reason in Politics.* Gerald Duckworth & Co., Ltd. 1939. 292 pp. 12s. 6d.

Stamp, Lord: *Christianity and Economics.* Macmillan and Co., Ltd. 1939. x, 194 pp. 5s.

Stockman, S. K.: *Transithandeln. Nordiska Bokhandeln i Distribution* Sweden. 1938. 271 pp. 15 Kr.

Streit, C. K.: *Union Now.* Jonathan Cape. 1939. 414 pp. 10s. 6d.

Strickland, C. F.: *Co-operation in India.* Oxford University Press. 1938. 112 pp. 3s.

Sykes, J.: *A Study in English Local Authority Finance.* P. S. King & Son, Ltd. 1939. vi, 307 pp. 12s.

Szeged, T. S.: *Nationale und internationale Preispolitik.* Gustav Fischer, Jena. 1938. 20 pp.

Thomas, G.: *The Pound Foolish and the Hour Sterling.* Smith & Longbottom, Ltd. 1939. 23 pp. 1s.

Thomas, P. J.: *Economic Results of Prohibition in the Salem District.* University of Madras. 1938. 39 pp.

Thornton, H.: *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain.* Library of Economics, No. 2. George Allen and Unwin. 1939. 368 pp. 12s. 6d.

Tinbergen, J.: *A Method and Its Application to Investment Activity.* Statistical Testing of Business-Cycle Theories. League of Nations. Allen & Unwin. 1939. 164 pp. 3s. 6d.

Vinberg, P. F.: *The French Franc.* (Revised). Guy Drummond Publications. McGill University, Montreal. 1939. 114 pp. $1.00.

Weintraub, Ruth G.: *Government Corporations and State Law.* Studies in History, Economics and Public Law, No. 448. Columbia University Press. P. S. King & Son, Ltd. 1939. 200 pp. 11s.

Welfling, W.: *Savings Banking in New York State.* Duke University Press, Durham, N.C. 1939. xiv, 205 pp. $3.00.

Willan, T. S.: *The English Coasting Trade, 1600–1750.* Manchester University Press. 1938. xiv, 234 pp. 12s. 6d.

Withers, H.: *The Defeat of Poverty.* Jonathan Cape Ltd. 1939. 287 pp. 7s. 6d.

Zeeland, P. v: *Economics or Politics.* Cambridge University Press. 1939. 56 pp. 2s. 6d.

Twenty Years of the Floating Debt[1]

By F. W. Paish

Section I

Post-War Adjustment (1919–23)

Although the Treasury were empowered as early as 1877 to finance the temporary requirements of the Consolidated Fund by the sale at a discount of Treasury bills of up to twelve months' currency, and although in 1902 the power was extended to cover the requirements of the Supply Services, the use made of these powers, up to August 1914, was, by post-war standards, exceedingly small. The highest total of Treasury bills recorded in those years seems to have been £41 Mn. in April 1910, consisting of £36.7 Mn. issued by tender to the market and £4.3 Mn. issued direct to government departments. In July 1914, the total outstanding was £15.5 Mn., of which only £6 Mn. had been issued by tender.

During the war the Floating Debt expanded enormously. On January 4th, 1919, it stood at £1,545 Mn., of which £1,098 Mn. was in Treasury bills and £447 Mn. in Ways and Means Advances. The very high figure for Ways and Means Advances seems to have been due to two causes. In the first place a system had grown up during the war whereby the banks and others were encouraged to place their surplus cash reserves on interest-bearing deposit account with the Bank of England, which re-lent them to the Treasury on Ways and Means Advances. These interest-bearing deposits, which in January 1919 may have amounted to as much as £200 Mn. or £250 Mn., were not mentioned in the Bank of England statements, and the obvious emergence of large surplus cash reserves was therefore prevented. They could, however, be converted very rapidly into non-interest bearing

---

[1] Acknowledgment is due to the Economic Research Division of the London School of Economics, without whose assistance the extraction and calculation of the Floating Debt figures would have been impossible; also to Mr. W. T. C. King for permission to consult important unpublished material on Treasury bills prior to 1930.

Bankers' Balances, and so gave the banks, in fact, an almost unlimited power of expansion.

The second cause of the high total of Ways and Means Advances was the fact that a large part, perhaps as much as £150 Mn., of the government securities then held as backing for the Treasury notes in circulation was apparently in the form of Ways and Means Advances.

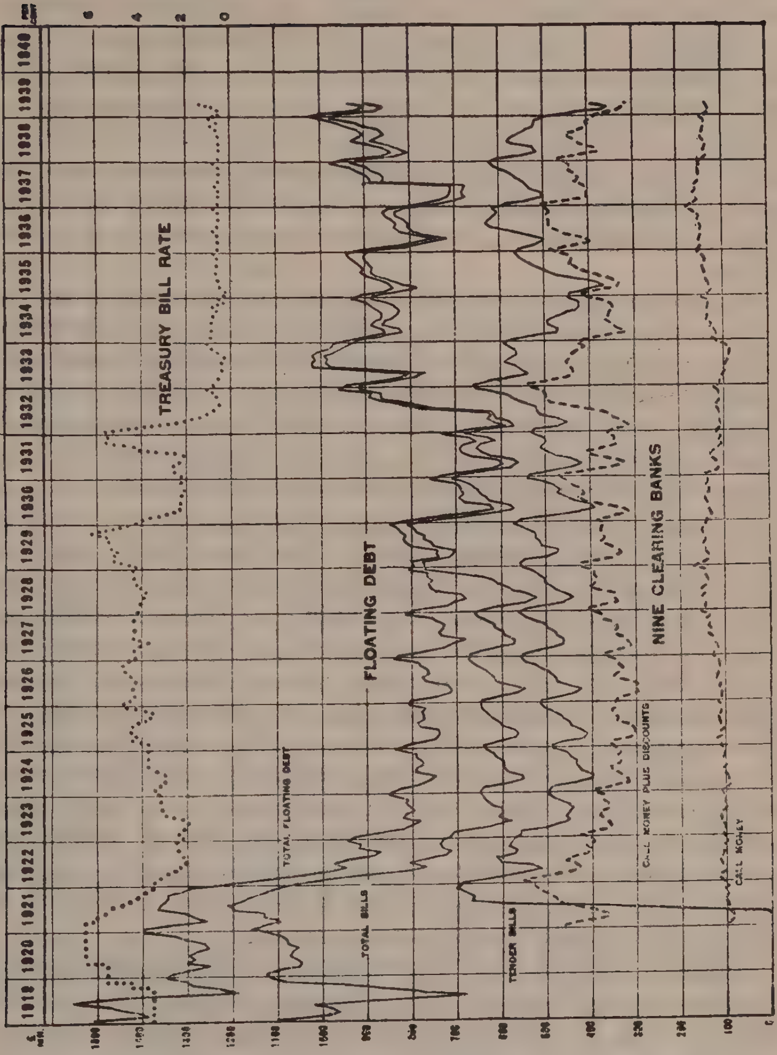
It is impossible to say how much of the Treasury bill total was in the possession of the banks and other non-official holders, and how much in the hands of the Savings Banks and other government departments and perhaps of the Bank of England, though later developments suggest that official holdings were substantial. During the war the issue of bills by tender was discontinued, first in April 1915, and again, after a brief resumption, in June 1917. Instead, Treasury bills were kept on permanent offer, or on " tap ", to all applicants, official and other, at fixed rates of interest, which were altered only when the demand for bills at the fixed rates became either inadequate or excessive. At the beginning of 1919 bills were available in two usances, three months and six months, and the rate of interest on each was 3½ per cent. per annum.

The history of the Floating Debt since 1919 can be divided into three main sections, which are clearly discernible in Charts I and II. First there is a period of post-war reduction, from 1919 until about the middle of 1923 ; then there ensues a period of stability, from 1923 until the departure of sterling from the gold standard in the autumn of 1931 ; and finally there is the period of managed currency and the Exchange Equalisation Account, from 1931 to date. This last period should probably be subdivided into the period of gold acquisition (September 1931 to March 1938) and the period of gold sales and heavy rearmament expenditure (March 1938 to date).

The first step towards getting the Floating Debt under control was the Victory Loan of July 1919. In order to facilitate the conversion of the floating debt in the hands of the banks, the sale of bills was suspended at the end of May, and the money to meet the maturing bills borrowed (indirectly from the banks) on Ways and Means Advances, so that by July 12th the total of Treasury bills had fallen to £628 Mn., and that of Ways and Means Advances had risen to £930 Mn. The loan was only partially successful. The total of the

BRITISH FLOATING DEBT

CHART I



NOTE.—The figures used in constructing the Floating Debt, Treasury Bills and Treasury Bill Rate curves in this chart are monthly averages of weekly figures. For weekly figures of Treasury bills see folded table at the end of this number.

Floating Debt was reduced from £1,559 Mn. on July 12th to £1,181 Mn. on August 2nd, but under the pressure of the heavy government deficits it soon began once more to rise, though it never again reached its former level. More important, the opportunity was taken to discontinue the system of borrowing from the banks, via the Bank of England, on Ways and Means Advances. By November 1919, Ways and Means Advances had fallen to just over £200 Mn., and thereafter appear to consist of three elements only—advances from the Currency Note Commissioners, advances from other government departments, and advances from the Bank of England. Not until 1922 were advances from the Bank distinguished in the Treasury statements from other advances.

In consequence of the renewed rise in the total Floating Debt, and of the reduction in Ways and Means Advances, by the end of the year the Treasury bill total had recovered to about the level of a year before. Broadly speaking, therefore, the cash receipts of the Victory Loan of 1919 were almost entirely devoted to current expenditure and to eliminating the surplus cash reserves of the banks.

It was two years before the next effort was made to reduce the total of the Floating Debt. The large budget surplus of 1920–21 was devoted to paying off other debt, principally Treasury bonds, and until the middle of 1921 the Floating Debt was fully maintained and, indeed, rather increased than diminished. Of the constituent items, Ways and Means Advances were reduced further, and by June 1921, Treasury bills had risen to a new high level of over £1,200 Mn. Nevertheless, in view of the fact that monetary conditions were at last becoming definitely easier and interest rates beginning to fall, the Treasury had ventured, at the end of April 1921, to re-introduce the system of selling bills by tender. As the system then inaugurated is that which exists to-day, it is worth while to examine it in some detail.

On each Friday the Treasury announces in the *London Gazette* the total value of the Treasury bills which it will offer for sale by tender on the following Friday. Tenders have to be made on special forms, obtainable from the Bank of England, and must be lodged at the Bank before 1 p.m. on the day on which the bills are offered. The minimum amount for which a tender will be considered is £50,000, and the tenderer has the right to specify on which day or days in the following week he wishes his bills to be dated and paid for. The bills are normally allotted to the highest tenders, and divided proportionately, where necessary, between those submitting equal tenders ; but the Treasury is under no obligation to accept any particular tender or to allot the whole of the bills offered. Under-allotment of bills by amounts of from £2 Mn. to £5 Mn. is not infrequent. A preliminary statement, giving the rate of the lowest tenders accepted, and the proportion of applications allotted to those tendering at this rate, is issued early on Friday afternoon, and a fuller statement is issued later in the day, giving in addition the total amount of applications received, the total of bills allotted, and the average discount rate for the whole issue.

This system differs from that in use before the war in three main particulars. Firstly, the fixation of the high figure of £50,000 for the minimum tenderable quantity, which in effect restricts applicants to banks, discount houses, bill brokers, and other large institutions. Secondly, applicants are allowed to spread the dates of their bills and of their payments over the whole of the following week, or to choose the days which suit them best, instead of having to tender for bills of a given date and to pay for the whole issue at once. And thirdly, all bills issued by tender are now of three months' date. They follow the same rules for determining the day of payment as do ordinary commercial bills, except that there are no days of grace.

Since all bills are of three months' date, it follows that by totalling the bills issued during thirteen consecutive weeks, the total of outstanding bills originally issued by tender can be approximately (and on many dates exactly) determined for the close of business on each Saturday. By calculating a thirteen weeks' moving total, changes in this total can be deduced. Further, since, except at the ends of quarters, the total of Treasury bills outstanding is published for each Saturday, by deducting the calculated total of "tender" bills from the published bill total, the outstanding amount of bills issued otherwise than by tender can be approximately determined. It should be noted that this method holds good only when the Treasury bill total refers to a Saturday ; for we have no means of knowing how much of a week's tenders is dated on each day. When, therefore, the total bill figure is given for the end of a quarter which does not fall on a Saturday, it cannot be related to the calculated total of tender bills.

The issue of bills by tender was not, at first, the exclusive method of issue to non-official purchasers that it is now. Until the middle of 1921 twelve months' bills continued to be obtainable through the " tap ", and for some years three months' bills, known as " additional " bills, were available for purchase through the " tap " at prices fixed slightly above the average rate of the previous week's tender. The issue of these appears to have been gradually restricted by reducing the number of days per week on which this offer was open, until in 1925 it ceased altogether. For the period for which these " tap " issues to the public continued, it is difficult to draw any clear deductions from the relative changes in the " tap " and " tender " totals. This is particularly unfortunate since in the two years following the resumption of issues by tender changes of great importance occurred in the Floating Debt. In the second half of 1921 the government began to tackle in earnest the task of reducing the greatly expanded Treasury bill total. To some extent out of budget surplus, but mainly out of the issues of Treasury bonds, the Floating Debt was reduced by more than 40 per cent. in two years :—

(£ Mn.)

	'Tender' Bills	'Tap' Bills	Total Treasury Bills	Ways and Means Advances	Total Floating Debt
1921, July 30th	660	542	1202	154	1356
1922, July 29th	603	152	755	159	914
1923, July 28th	450	152	602	199	802

It will be seen from the above figures, and in more detail from Charts I and II, that in the first of these two years the great bulk of the decline was in 'tap' bills, while in the second it was entirely in 'tender' bills. Over the whole period the decline in 'tap' bills was much the greater.

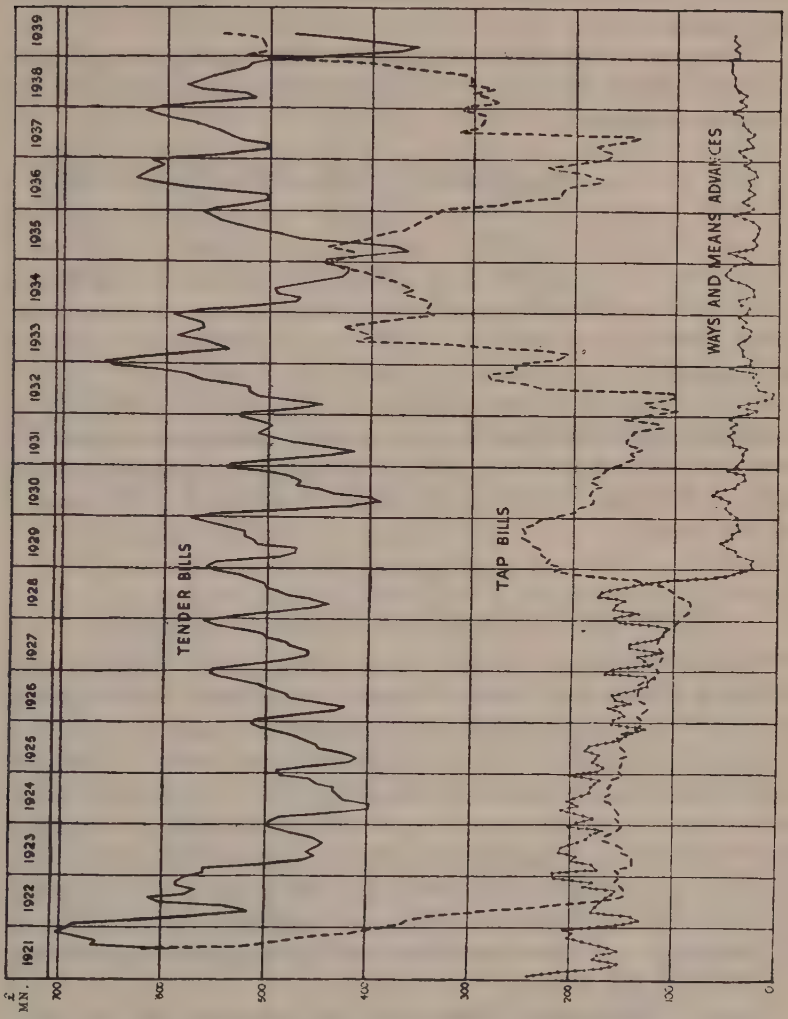
While the continued sale to the market of an unknown quantity of bills otherwise than by 'tender' renders impossible any definite statement, it seems probable that the amount of 'tap' bills sold to the market was small, and that the 'tap' bill total consisted mainly of bills held by the Issue Department of the Bank of England, the Post office, the Currency Note Commissioners and other government funds and departments.[1] If this is so, then

---

[1] In this article the phrase 'the Departments' will refer to all official holders of 'tap' bills (including the Bank of England) apart from the Exchange Equalisation Account, except where it is made clear in the context that the Bank of England is not included.

BRITISH FLOATING DEBT

CHART II



Note.—The figures used in constructing this chart are monthly averages of weekly figures. For weekly figures of Treasury bills see folded table at the end of this number.

the greater part of the great decline in the Floating Debt in 1921–22 consisted merely of substituting bonds for bills in the portfolios of the Departments. The smaller reduction from 1922 to 1923, on the other hand, seems to have taken place wholly in bills held by the market, and therefore to have been in fact much more important.

This view finds some confirmation in the figures given in the MacMillan Report of Treasury bills discounted by the clearing banks :—

	Nine London Clearing Banks' Discounts of Treasury Bills		Treasury bills issued by 'tender'	Total Treasury Bills
	Total	12 months' decrease	12 months' decrease	12 months' decrease
	£ Mn.	£ Mn.	£ Mn.	£ Mn.
July 1921 ..	252.7	—	—	—
July 1922 ..	206.7	46.0	57	390
July 1923 ..	144.6	62.1	153	153

It is clear that the decline in the banks' holdings of Treasury bills was much more closely related to the fall in 'tender' bills than to the fall in total bills. It seems reasonable to deduce that the great bulk of the 'tap' bills was in official hands.

Section II

Stability and the Gold Standard (1923–31)

By the middle of 1923 the process of reducing the Floating Debt had been virtually completed, and for the next five years, apart from seasonal fluctuations, little further change took place. The Floating Debt as a whole showed a slight downward trend from 1923 to 1928, but as both Ways and Means Advances and "tap" bills diminished, "tender" bills showed an increase over the period of about £50 Mn., the rise occurring chiefly in 1926, the year of the General Strike. This period of relative stability offers a good opportunity of observing the purely seasonal movements of the Floating Debt.

From a minimum about the beginning of the financial year, the Floating Debt (Chart I) usually showed little change during April, and rose slightly in May. In June it rose sharply with the heavy interest payment on War Loan due on the first of that month. It usually showed a further small rise in July, a moderate decline in August and sometimes in September, with the second instalment of income tax collections, and a moderate rise in October and November. In December it again rose sharply with the second half-yearly interest payment on War Loan to the highest point of the year. In the last three months of the financial year the heavy inflow of revenue from Income Tax and Super-Tax caused a very sharp decline to the lowest point of the year, usually reached towards the end of March.

The seasonal movements in Treasury bills, both for total bills and for " tender " bills only, differed slightly from those of the total Floating Debt. The peaks were usually less marked and the minor decline in August was usually absent. This was because the sudden heavy requirements for meeting War Loan interest were too great to be met out of one week's expansion of the Treasury bill issue, and were therefore met by means of an expansion in Ways and Means Advances, partly from the Bank and partly from government departments. These Ways and Means Advances were subsequently paid off either out of the gradual expansion of the Treasury bill issue or, especially in the case of the December expansion, out of the surplus of revenue. Thus the sharpest movements in the total Floating Debt were absorbed and the outline of the Treasury bill curve smoothed.

The phenomenon of the rise in Ways and Means Advances (Chart II) at the dates of the War Loan interest payments is still apparent on occasion, though in recent years it has been neither so marked nor so regular: the first because, since the War Loan Conversion of 1932, the amount involved is reduced; and the second because the calls on the various conversion loans issued in recent years have usually been so timed as to ensure substantial receipts from the loan on either June 1st or December 1st.

It also appears that in recent years the Treasury has on certain occasions obtained its temporary advances, not from the Bank of England at all, but entirely from the Departments or the Exchange Equalisation Account. On many of these occasions it has obtained the money by the issue of " tap " bills instead of on Ways and Means Advances. The occasions when it thus finances its exceptional requirements by issues of "tap" bills frequently seem to coincide with periods when the Exchange Equalisation Account is believed to have been making substantial net sales of gold, and therefore has sterling available for investment.

When the Treasury obtains the money it requires either from the Exchange Equalisation Account or from the Departments, it is necessary for these to accumulate the necessary funds in advance. On these occasions, therefore, for a period of some weeks before the date of the interest payments, there is a rise in Public Deposits at the Bank of England and a consequent fall in Bankers' Deposits (for the Bank, even at the height of the cheap money era, has never pursued the policy of preventing such temporary declines in Bankers' Deposits); while as soon as the interest payment is made there is a fall in Public Deposits and a rise in Bankers' Deposits. On the other hand, when a substantial part of the interest payment is financed by Ways and Means Advances from the Bank, there is a smaller prior rise in Public Deposits and a temporary subsequent rise in the Bank's holding of Government Securities. Thus the former method of financing interest payments causes a tendency towards exceptional financial stringency in the period preceding an interest payment, and the latter towards exceptional financial ease in the period following the payment.

About July 1928 preparations began to be made for the transfer of the Treasury note issue to the Bank of England, which eventually took place towards the end of November in that year. As part of the preparation it was considered desirable to convert the Ways and Means Advances, which formed part of the security behind the note issue, into Treasury bills—a form presumably regarded as more suitable for holding by the Issue Department of the Bank. Consequently, between July and November, during which period the total of the Floating Debt was virtually unchanged (£760 Mn. on July 7th and £752 Mn. on November 24th) Ways and Means Advances by Departments fell by £163 Mn. to £13 Mn., and total Treasury bills rose by £155 Mn. to £739 Mn. Of the fall in Ways and Means Advances about £40 Mn. or £50 Mn. was seasonal, and this was reflected in a rise of £49 Mn. in "tender" bills. The remainder was exceptional, and was reflected in a rise of £106 Mn. in "tap" bills. Since 1928 Ways and Means Advances have rarely exceeded £50 Mn., as compared with the £100 Mn. to £160 Mn. in the years 1920 to 1927.

In the first quarter of 1929 the seasonal decline in the Floating Debt was unusually small, owing to a net repayment in February of over £50 Mn. in Treasury bonds. These appear to have been held partly by the market and partly by the Departments, for on the date of repayment the rise in Treasury bills was shared fairly equally between " tap " and " tender " bills.

The total of " tap " bills remained at the relatively high level of £220—£250 Mn. until November 1929, when the 5 per cent. Conversion Loan was launched, partly for the repayment of Treasury bonds, and partly for the reduction of the Floating Debt. The latter consequently shows an unusually small rise in the last quarter of 1929 and an unusually heavy fall in the first quarter of 1930. By the middle of April it had been reduced to £616 Mn., as compared with £745 Mn. twelve months earlier. It would seem, however, that a substantial proportion of the loan had to be taken up " inside ", for over the year (April 1929 to April 1930) there was a fall of about £50 Mn. in " tap " bills out of a total fall in Treasury bills of about £140 Mn.

From April 1930 to September 1931 there was little change, other than seasonally, in the total of the Floating Debt. There was, however, a non-seasonal rise of some £40 Mn. in " tender " bills, and a corresponding fall in " tap " bills, which may have been due to an excess of expenditure in certain funds, and notably the Unemployment Fund.

SECTION III

MANAGED CURRENCY AND THE EXCHANGE EQUALISATION ACCOUNT (1931–39)

The period between the departure of sterling from the gold standard in September 1931 and the inauguration of the Exchange Equalisation Account at the end of June 1932 constitutes a kind of interregnum during which the effects of international capital movements were controlled, in so far as they were controlled at all, by various extemporary devices.

To begin with, the Treasury had to dispose of the proceeds of the foreign credits raised abroad and drawn upon in the effort to remain upon the gold standard. In the first instance the bulk of the sterling so received was used to pay off " tap " bills, which, between September 12th and October 10th, fell by £50 Mn.[1] What the Departments did with the sterling for the moment is not certain, but it seems likely that, like the Exchange Equalisation Account in 1938, they used a substantial part of it to buy up " tender " bills in the market, and so enabled the banks to maintain their cash reserves. This interpretation is confirmed by the sharp fall in bank discounts at this time.

---

[1] The movements during this period are so sharp and temporary that the figures of monthly averages, reproduced on Charts I and II, do not adequately reflect them.

Between October 10th and the end of the year, " tap " bills recovered sharply to their former level, while the seasonal rise in " tender " bills was unusually small. It is likely that this was due to the Departments' replacing the bills purchased earlier from the market with new " tap " bills. Thus, in effect, the Treasury used the sterling proceeds of its foreign credits to meet its seasonal excess of payments in the last quarter of the calendar year.

In the first months of the new year the heavy return of capital from abroad enabled the Treasury to make provision for the repayment of its foreign credits. It financed this by using a large part of the seasonal excess of revenue to repay " tap " bills, thus placing sterling funds in the hands of the Departments for the purchase of foreign exchange. When the repayment of £61 Mn. of foreign credits became due at the end of February, the Treasury bought most of the necessary foreign exchange from the Departments, owing them for it £17 Mn. in additional " tap " bills and £35 Mn. on Ways and Means Advances. There are no such obvious signs of the repayment of the £24 Mn. of foreign credits made at the end of March and the beginning of April. As this was a period of especially large imports of capital, the requisite exchange may have been bought at the time in the market, and paid for out of the seasonal excess of revenue. The effect of the repayment of £85 Mn. of foreign credits is seen in the reduction in the magnitude of the seasonal falls in the Floating Debt and in " tender " bills, which otherwise would have been exceptionally large.

After February the Bank of England seems to have played a large share in checking the unwanted rise in the value of sterling. Between the end of February and the end of June the Bank increased its holdings of " Other Securities " (presumably foreign exchange) by £33 Mn., and, in addition, bought £15 Mn. of gold (costing about £20 Mn. at market price). These increases were only partially offset by reductions in its holdings of Government Securities, and therefore resulted in a rise in Bankers' Deposits, thus initiating the "cheap money" policy. The part played by the Departments in controlling the foreign exchanges seems to have been small after February. The considerable decline in "tap" bills and Ways and Means Advances in the second quarter of 1932 can apparently be attributed to their conversion into Treasury bonds, of which nearly £100 Mn. were issued during the quarter. The seasonal rise in "tender" bills was diminished for the same reason.

Meanwhile the Government had found inconvenient its makeshift methods of controlling the exchange value of sterling, and had obtained authority to set up the Exchange Equalisation Account. At the end of June the Account was formally installed with a capital of £150 Mn. in "tap" Treasury bills, plus the £25 Mn. remaining in the old Dollar Exchange Account, but minus the loss of £8 Mn. incurred on the repayment of the Bank of England's foreign credits, and apparently also the nominal loss incurred on the Bank's recent gold purchase. The initial capital of the Exchange Equalisation Account was therefore £167 Mn., of which about £5 Mn. was already locked up in the Bank's gold. It seems at once to have taken over about £30 Mn. of foreign exchange from the Bank, transferring Treasury bills in payment, while it is not unlikely that part or all of the remainder of the old Dollar Account, which was presumably in sterling at the end of September 1931, had, by June 1932, been reinvested in foreign exchange or gold. Thus, of the initial capital, something approaching £50 Mn. may have been in the form of foreign exchange or gold, £5 Mn. in the form of a contingent claim on the Bank's gold, and perhaps £115 Mn. in Treasury bills.

The methods by which the Exchange Equalisation Account finances its purchases of gold and invests the sterling proceeds of its gold sales, have been too frequently discussed to require more than a brief outline here. When the Account requires sterling to pay for gold, it generally seems to allow a portion of its holdings of "tap" bills to run off, thereby obliging the Treasury to supply it with cash, either out of a seasonal surplus of revenue or out of additional sales of bills by tender. Conversely, when the Account sells gold and has sterling to invest, it normally seems to take up more "tap" bills, thus enabling the Treasury either to meet a seasonal surplus of expenditure or to reduce its issues of "tender" bills. Thus purchases of gold by the Account usually cause a fall in " tap " bills and a rise (or the absence of a seasonal fall) in " tender " bills, and sales of gold a rise in " tap " bills and a fall (or the absence of a seasonal rise) in " tender " bills.

In cases where the sales of gold by the Fund are very large and rapid, this procedure is sometimes too slow, and interim effects may appear. There have been times when the Account seems to have been unable to re-invest its sterling receipts rapidly enough, with the result that they have accumulated in Public Deposits at the Bank, thereby reducing Bankers' Deposits and leading to a temporary tendency towards stringency. This accumulation of funds may on occasion have been deliberate, in preparation for heavy Treasury requirements for the payment of interest. (See page 252.)

Recently the Account seems on some occasions, and especially during the summer and autumn of 1938, to have tried to accelerate the return to the banking system of its accumulated sterling funds by buying " tender " bills directly from the market. When this method is used the relative figures of " tap " and " tender " bills obviously give no immediate reflection of the Account's dealings, though since the " tender " bills thus acquired by the Account seem usually to be converted into " tap " bills when they mature, the time-lag before the results of its dealings once more become apparent is not more than three months.

The difficulties of interpreting the meaning of changes in the floating debt figures is greatly increased by the fact that, though in recent years the operations of the Exchange Account have been the most important cause of fluctuations in the total of " tap " bills, they are far from being the only cause. The " tap " bill holdings of other Departments may vary with any excess of their receipts or payments, while both the Departments and the Bank of England may vary their investments between bills and other types of securities. These fluctuations have been greatly increased by the methods used, especially in recent years, for issuing funding loans. The practice has grown up for the Departments (including the Issue Department of the Bank of England) in effect to underwrite these loans, taking up any amounts not subscribed for by the market, and making payments for their share of the calls by surrendering " tap " bills to an equivalent amount.

Thus the immediate effect of such loans is to reduce the outstanding total of " tender " bills only in so far as the loans are taken up by the public, and to reduce " tap " bills in so far as they are taken up by the Departments. But since the real purpose of these funding loans has been to reduce the outstanding total of " tender " bills (from 1932 to 1938 periodically inflated by the cost of buying gold, and in 1937–8 by the cost of buying arms), the redemption of " tap " bills is merely an intermediate stage in the operation. The full objects of the issue are achieved only as the Departments replenish their holdings of " tap " bills, either out of a surplus of revenue, or out of sales of the recently acquired or other securities, and so enable the Treasury to pay off " tender " bills. In effect, therefore, the Treasury is able to spread its sales of long-term securities over a period of several months, and presumably to get a better average price for them than if they had all had to be placed in the market at once. The bill holdings of the Departments thus tend to show a gradual increase in anticipation of a loan, a rapid fall as the new loan is paid for, and a gradual replenishment as this in turn is digested.

Where the loan is for the conversion of a maturing long-term loan the symptoms are different. Now the purpose of the Departments will be to acquire as much as possible of the maturing loan in order to prevent its falling into the hands of holders who will regard it as a " short " and will therefore not be willing to convert it into a long-dated security. The Departments will therefore tend to *reduce* their bill-holdings before the issue in order to buy up the security to be redeemed.

Another possible cause of changes in the " tap " bill total is the purchase or sale of gold by the Bank of England. If, on the occasion of a purchase of gold from the Exchange Account, the Bank pays for it wholly by a transfer of bills, there is clearly no change in the bill totals. If, however, it pays for part of it in cash—i.e., by an issue of additional notes and a corresponding credit to the Account's balance at the Bank—the Account can use these new resources to buy more bills from the Treasury through the " tap ". In this case the total issue of " tap " bills is larger and of " tender " bills smaller than if the Bank had not bought the gold. Conversely, if the Bank sells gold to the Account and is paid for it entirely by a transfer of bills, there is no change. But if the Account pays part of the price in cash, its power to buy gold or bills is reduced, and the total issue of "tap" bills is smaller and of "tender" bills larger.

It will be seen from the foregoing outline that in recent years the total of the Floating Debt and its constituent items have been subject to the influence of a considerable number of independent, or partly independent, forces, the most important of which for convenience are summarised below :—

A. CHIEF CAUSES OF FLUCTUATIONS IN TOTAL FLOATING DEBT.

(1) Excess of Treasury income or expenditure.

(2) Funding loans issued by Treasury, or loans repaid by issue of Treasury bills. Unless new loans are issued in exchange for existing loans, or for their immediate repayment, all large loans, even those issued to provide for increased expenditure, act temporarily as funding loans.

(3) Moneys lent by Treasury (of which the most important have been issues to the Exchange Equalisation Account), or repaid to the Treasury.

B. CHIEF CAUSES OF CHANGES IN CONSTITUENT ITEMS OF FLOATING DEBT.

(1) *Changes in "Tap" Bills.*

(*a*) Issues of bills to Exchange Equalisation Account (and repayments by the Account, if ever made).

(*b*) Sales or purchases of gold by Exchange Equalisation Account (not to or from the Bank of England).

(*c*) Excess of income or expenditure of Departments.

(*d*) Expansion or contraction of Government Securities in Bank of England otherwise than in exchange for gold sold to or bought from Exchange Account.

(*e*) Bank's changes in gold holdings not compensated by opposite changes in holdings of Treasury bills.

(*f*) Sales or purchases of longer dated securities by Bank or Departments.

(*g*) Replacement of "tender" bills held by Account, Bank or Departments with "tap" bills (and conceivably, though improbably, vice versa).

(2) *Changes in Ways and Means Advances.*

Increases in Ways and Means Advances are usually made to finance a large and sudden expenditure, and are subsequently paid off by increased issues either of "tender" or "tap" bills, or out of an excess of revenue.

The seven years of the operations of the Exchange Equalisation Account may be divided into two broad phases —the period of 1932 until early in 1938, when the Account was on balance buying gold heavily, and the period 1938–9, when it was selling gold. While, however, the period 1932–8 saw on the whole an immense increase in the country's gold stocks, it contained two minor periods of substantial gold sales—during the second half of 1932 and from early in 1934 to early in 1935. The years in which it gained gold were therefore 1933 and 1935–7.

The Period of Gold Acquisition.

(1) *July–December 1932. First Period of Gold Sales.*

After the inauguration of the Exchange Account at the end of June, only seasonal changes in the Floating Debt occurred until the middle of August, when there was a net repayment of nearly £60 Mn. of Treasury bonds. Something like two-thirds of these seem to have been in the hands of the Departments (presumably largely purchased during the period of falling "tap" bills in May and June) and the total of "tap" bills outstanding rose from £229 Mn. on August 13th to £268 Mn. on August 20th. In the first week in September the final £28 Mn. of the Treasury's foreign credits were repaid, presumably out of the foreign exchange resources of the Exchange Account, and the "tap" bill total, which had fallen to £258 Mn. on September 3rd, rose again to £295 Mn. on September 17th.

The final repayment of the credits seems to have depleted the gold holdings of the Account so seriously that it was unable to offer much resistance to the pressure on the exchange which developed during the last quarter of the year, with the result that sterling depreciated fairly sharply. In order to pay the December instalment on the United States debt the Treasury had to use £19 Mn. (at par) of the Bank's gold, apparently paying for it in "tap" bills.

While the August bond repayment helps to account for the rise in "tender" bills in the third quarter, it does not account for the rise over the whole year, for it merely offset part of the effects of the issue in the second quarter. The rise of about £125 Mn. in "tender" bills between December 1931 and December 1932 is due partly to the fact that the seasonal rise in the last quarter of 1931 had been reduced by about £50 Mn. by the temporary use of the sterling proceeds of the foreign credits, and partly to the loss of over £40 Mn. on the repayment of the foreign credits. There was also, however, a sharp fall in "tap" bills between September and December for which there is no obvious reason. The most likely explanation seems to be that the Departments were facilitating the War Loan conversion by supporting the gilt-edged market. The effect of this fall in "tap" bills was to induce a corresponding additional expansion in the "tender" bill issue, which on January 7th, 1933, reached a total of £666 Mn., the highest figure which had been recorded since January 1922 and which has not since been equalled. It should be emphasised that little of this exceptionally high total can be attributed to the requirements of the Exchange Account for the purchase of gold; the additional issues had been used partly to finance the loss on repaying the credits and apparently partly to purchase longer-dated securities.

(2) *December 1932—January 1934. First Period of Gold Acquisition.*

From the middle of December 1932 the pressure on sterling ceased and was replaced by a heavy inflow of capital. The Exchange Account began to acquire gold on a large scale and the total of "tap" bills fell sharply. By the end of January the Exchange Account was already in a position to re-sell gold to the Bank of England, thereby augmenting both the Bank's diminished reserves and its own supplies of sterling. Between the middle of January and the end of June these sales of gold to the Bank totalled about £70 Mn., at the old parity, or just over £100 Mn. at market price. £33 Mn. of the increased gold holdings of the Bank were offset by a decline in Government Securities (in both Departments) and a further £6 Mn. by a decline in Other Securities. Notes in circulation, however, rose by £20 Mn. and total Deposits by £9 Mn. In so far as the transfer of gold to the Bank was offset by a decline in the Bank's holding of Government Securities, it presumably represented merely a transfer of bills from the Bank to the Exchange Account and had no effect on the "tap" bill total. But in so far as it was accompanied by a rise in liabilities it presumably represented a transfer of cash to the Account and so enabled the Account to increase its holdings of bills, thus tending to increase the total of " tap " bills and decrease the total of " tender " bills. In other words, part of the national gold holding had now been financed by monetary expansion instead of by borrowing.

In spite of the tendency of the foregoing transaction to increase the volume of " tap " bills, the amount outstanding actually fell by £64 Mn. between December 24th and May 13th, indicating an increase of over £90 Mn. in the non-sterling assets of the Account, or of £60 Mn. in the gold actually in its possession (since about £30 Mn. represented the nominal " loss " on the re-sale of gold to the Bank). The total value of the gold bought by the Account during this period, including re-sales to the Bank, was therefore about £160 Mn. It is possible that even this figure underestimates the amount of the gold acquisitions, for it is quite possible that the other Departments were simultaneously increasing their holdings of bills in preparation for the 2½ per cent. Conversion Loan launched in October. In any case, by the middle of May the sterling reserves of the Account had become so depleted that the Treasury was obliged to issue to it a further £200 Mn. of bills.

In the second half of the year the " tap " bill total at first declined further, and then rose fairly sharply for a few weeks, partly in consequence of a passing weakness in sterling and sales of gold by the Account, and partly perhaps because of continued purchases of bills by the Departments. With the issue of the new loan in October the trend was sharply reversed. A large proportion of the £100 Mn. issued for cash was taken up by the Departments and " tap " bills fell sharply on the date of each call; while at the same time the trend of sterling changed, so that the Exchange Account was probably acquiring more gold. Consequently between September 23rd and December 23rd, while the total Treasury bill issue fell by £54 Mn., the " tap " bill total fell by no less than £91 Mn. and the " tender " bill total rose by £37 Mn.

(3) *1934. Second Period of Gold Sales.*

Early in 1934 the dollar was finally revalued and capital was withdrawn from Britain, both to U.S.A. and, later, to the Continent. At first sterling was allowed to fall sharply, but thereafter the Exchange Account apparently sold substantial quantities of gold to check the decline. In the first quarter the Floating Debt fell seasonally by about £130 Mn. and the total of " tender " bills by about the same amount, while the " tap " bill total showed little change. In the second quarter the " tap " bill issue rose by about £20 Mn., in spite of the fact that the Departments apparently had to take up part of the £150 Mn. 3 per cent. Funding Loan issued in April. The bulk of this issue was for the purpose of funding Treasury Bonds and only about £30 Mn. was available for reducing the Floating Debt. Even this amount was enough to make the seasonal rise in the total Floating Debt obviously smaller than usual and the increase in " tap " bills made the rise in " tender " bills still smaller. In the second half of the year the seasonal rise in the total Floating Debt was exceeded by the rise of some £80 Mn. in " tap " bills, so that "tender" bills showed a contra-seasonal fall. The rise in " tap " bills may be ascribed partly to the re-investment by the Account of the proceeds of sales of gold and probably partly to the replenishment of the portfolios of the Departments.

At the end of December the total Floating Debt was only about £40 Mn. lower than twelve months before, and total Treasury bills about £50 Mn. lower, but, since " tap " bills had risen by nearly £100 Mn., " tender " bills fell by nearly £150 Mn. to £451 Mn., the lowest end-December figure on record. This decline, and the consequent " bill famine ", were probably due partly to the delayed effects of the conversion loan of the autumn of 1933 and to a small extent to the funding loan of 1934, but it is clear that its chief cause was the heavy gold sales and the use of the sterling proceeds to pay off " tender " bills.

(4) *1935—1938. Second Period of Gold Acquisition.*

At the beginning of 1935 a short period of firmness of sterling was followed by a still shorter period of weakness, and during the first quarter the net changes in the Exchange Account's gold holdings were probably small. The total of " tap " bills at the beginning of April was actually slightly lower than at the beginning of January, but the seasonal decline in the Floating Debt was sufficient by itself to bring the total of " tender " bills down to the extremely low figure of £358 Mn. on March 16th, thus intensifying the shortage of bills. In April, however, there began the great inflow of capital from France and other parts of the Continent which was to continue, with only temporary pauses, for nearly three years. In addition, the improving trade of many of the sterling bloc countries enabled them to accumulate large amounts of sterling in London and so add to the inflow of capital. As a result, between April 1935 and April 1938 the Exchange Account is believed to have bought something like 65 Mn. ounces of gold at a cost of about £450 Mn., of which it re-sold about 31 Mn. ounces to the Bank of England for £134 Mn. Of the Bank's purchases, nearly £100 Mn. were financed by an expansion of the note circulation and less than £40 Mn. by a net reduction in Government Securities. Thus, the amount of finance which had to be provided by the Treasury was probably rather over £350 Mn.

The process by which this finance was provided was the now customary procedure, first, of issuing more "tender" bills to pay off the "tap" bills held by the Exchange Account and so providing it with sterling to give in exchange for gold, and then periodically of funding the additional bills so issued. The first part of the process is well illustrated in the period from April to November 1935. During that period, while the total Floating Debt showed a normal seasonal expansion of rather under £100 Mn., "tap" bills fell by over £100 Mn. and "tender" bills rose by about £200 Mn. Gold purchases are likely to have been the cause of the fall in "tap" bills, for it is unlikely that the Departments were reducing their bill holdings; in fact, they were probably increasing them.

At the beginning of December 1935 an issue was made of £200 Mn. of 2½ per cent. Funding Loan, of which £100 Mn. were required to redeem Treasury Bonds, leaving £100 Mn. for funding bills. From the movements of the bill figures on the dates of the calls, of which the last was not until the end of March, it seems probable both that a large proportion of the loan was taken up by the Departments, and that the bulk of the maturing bonds were in the same hands. Meanwhile, the Exchange Account apparently continued to make substantial purchases of gold, thus preventing the total of "tender" bills from being reduced more than seasonally as the result of the public subscription of some part of the new loan. Consequently the effects of the new loan on the "tender" bill issue seem to have been confined to a reduction in the December peak, while the fall from December 1935 to April 1936 was if anything smaller than usual. Of the fall of £116 Mn. in " tap " bills between the end of November and the end of April, rather over half may probably be ascribed to a decrease in the holdings of the Departments and rather under half to the Exchange Account.

During the next four months, from the end of April to the end of August 1936, the Account apparently continued to gain gold rapidly and the " tap " bill total fell by a further £60 Mn., from £225 Mn. to £165 Mn., while the " tender " bill total rose to the high figure of £630 Mn. During October the movement was temporarily reversed as a result of an outflow of capital following upon the French devaluation of September 28th, and by the beginning of November the " tap " bill figure had risen to £235 Mn., or £10 Mn. more than at the end of April. It is, however, unlikely that the additional bills were held by the Exchange Account; it is more probable that the Departments had been expanding their holdings on a substantial scale and that, despite the losses of September and October, at the beginning of November 1936, the Exchange Account held appreciably more gold and less bills than six months before.

Although the autumn outflow of gold had checked the seasonal rise in " tender " bills, the total of " tender " bills still stood above £600 Mn. and at the beginning of December 1936 the Treasury issued another £100 Mn. Funding Loan at 2¾ per cent., of which £28 Mn. was needed for the repayment of bonds, leaving £72 Mn. for funding bills. Their action in so doing seems to indicate their scepticism about the permanence of the recent firmness of the franc, for if a further outflow of capital to France was to be expected, a reduction in the " tender " bill issue would take place without a funding loan. A further indication of the official view is seen in the transfer of £65 Mn. (at par) of gold from the Exchange Account to the Bank, and the simultaneous reduction of £60 Mn. in the fiduciary issue. As the reduction in the Bank's holdings of government securities was almost equal to its increase in gold, there was no appreciable effect on the figures of the Floating Debt.

A substantial proportion of the new loan was again taken up by the Departments and between the end of November 1936 and the beginning of February 1937 " tap " bills fell by £50 Mn., of which a large part was probably due to the reduced holdings of the Departments, though the Account had apparently been gaining gold again since November. Any increase in "tender" bills due to this was, however, apparently more than offset by sales of the new loan to the public, and "tender" bills showed an unusually heavy seasonal fall, from £622 Mn. at the end of December to £500 Mn. at the end of March.

The end of March 1937 is notable for two events. It introduced the first financial year in which the Treasury was obliged to borrow for rearmament, and it was the date of the first official figure for the Exchange Account's gold holdings (though this was not actually published until three months later). Henceforward the six-monthly changes in the Account's position are a matter of knowledge, though intermediate changes must still be estimated. The official total as at 31st March, 1937, was 26.6 Mn. ounces, so that, including 42 Mn. ounces re-sold to the Bank, the Account's total purchases between June 1932 and March 1937 had been about 68 Mn. ounces, costing about £450 Mn.

During the second and third quarters of 1937 the Exchange Equalisation Account continued to gain gold rapidly, and, despite some further sales of gold to the Bank, its sterling resources had to be augmented at the end of June by the issue to it of a further £200 Mn. of Treasury bills. Meanwhile the seasonal rise in the total floating debt had been checked by the issue in May of a £100 Mn. of National Defence Bonds. A large proportion of these seem to have been taken up initially by the Departments, thus accentuating the fall in "tap" bills due to the purchases of gold, so that by June 26th, before the new issue of bills, the "tap" bill total had fallen to the very low level of £132 Mn.

In the third quarter the "tap" bill total continued to fall in consequence of further purchases of gold, and at the end of September stood at £296 Mn. The decline of £36 Mn. during the quarter is probably a good deal less than the cost of the Exchange Equalisation Account's purchases of gold, for it is likely that the Departments were increasing their holdings of bills as they disposed of their share of the National Defence Bonds. For the two quarters together the Account's gain of gold was about 13¼ Mn. ounces, costing about £94 Mn., in addition to about 3 Mn. ounces re-sold to the Bank.

With the autumn of 1937 the period of large gold purchases ceases. In the last quarter of the year it seems likely that the

Exchange Account lost some gold, and, though it more than recovered it in the first quarter of 1938, the increase in its holdings for the half-year was little more than 2½ Mn. ounces, costing about £18 Mn. As the total of "tap" bills was almost the same at the end of March as it had been at the end of the previous September, the Departments seem to have been replenishing further their bill portfolios in preparation for the next loan.

By the end of March 1938 the gold holding of the Account had reached its highest point of 42½ Mn. ounces, worth nearly £300 Mn. On the same date the Bank of England held nearly 77 Mn. ounces (valued in its books at £326.4 Mn., but actually worth about £540 Mn.), of which about 48½ Mn. ounces, worth about £340 Mn., had been bought from the Exchange Account. The combined total of gold held by the Account and the Bank amounted to nearly 120 Mn. ounces, worth about £840 Mn. The finance of this gold had been approximately as follows:—

	£ Mn.	£ Mn.
Gold Originally Held by Bank of England.		
Value at par	121	
Rise in value	79	— 200
Net Gold Purchases of Bank of England from 31.3.32 to 31.3.38.		
Financed by expansion of credit	172	
Financed by reduction in "Other Securities"	34	
Total price paid by Bank ..	206	
Difference between par and market price, charged to Exchange Account	117	
Total value at prices ruling on dates of purchase by the Bank	323	
Rise in value since purchase by Bank	17	— 340
Gold Held by Exchange Account on 31.3.38.		
At estimated cost	280[1]	
Estimated rise in value since purchase	20[1]	— 300
Total ..		840

---

[1] These figures include an estimate of the "jobbing" profits of the Account, but make no allowance for interest on Treasury bills (which does not seem to be paid to the Account though it is paid to other holders of "tap" bills) or for administrative costs.

From the foregoing table it will be seen that the share of the cost borne by the Exchange Account had been nearly £400 Mn. (£117 Mn.+£280 Mn.). Of this about £60 Mn. had been raised by the increase in the issue of Treasury bills by "tender",[1] while perhaps another £20 Mn. had been obtained on "tap" bills and Ways and Means Advances from the Departments. It would therefore appear that the balance of some £320 Mn. had been financed by long-term loans.

THE PERIOD OF GOLD LOSSES (*April 1938—March 1939*).

The effects of the conservative financing of the increase in the country's stock of gold were clearly seen during the next year, when the heavy withdrawals of foreign balances from London obliged the Exchange Account to sell nearly 40 Mn. ounces of gold in order to check the decline in sterling. The strain on sterling began with the heavy reflux of capital to France after the final stabilisation of the franc early in May, and there is little doubt that the Exchange Account sold a large quantity of gold at this time. This was reflected at the moment in an accumulation of sterling to the Account's credit in Public Deposits at the Bank of England, but surprisingly little in the total of "tap" bills, which rose only from £282 Mn. on May 7th to £311 Mn. on June 11th. This disproportionately small effect is believed to have been due to large purchases of "tender" bills by the Account, which for the time being effectively prevented the effect of the gold sales from being seen in the "tap" bill figures. At the end of June there was issued the National Defence Loan of £80 Mn. This seems to have been taken up mainly by the public, and the total of "tender" bills fell from £585 Mn. on June 18th to £560 Mn. on August 6th, despite the continued heavy expenditure, while "tap" bills rose slightly.

During September further heavy withdrawals of capital from London occurred in consequence of the international crisis, and "tap" bills rose from £294 Mn. on August 27th to £362 Mn. on October 1st, while "tender" bills fell from £555 Mn. to £521 Mn. The rise in "tap" bills for the whole six months, however, was only about £60 Mn., which is something like £90 Mn. less than the proceeds of the 20.8 Mn. ounces of gold sold by the Exchange Account during the period. Even if allowance is made for a possible decrease in bills held by the Departments, it is clear that the Account was still holding a substantial amount of " tender " bills.

---

[1] From £454 Mn. on March 26th, 1932, to £512 Mn. on March 26th, 1938.

The full effects of the gold sales only became visible in the following half-year. Further heavy sales of gold, estimated at not less than 14 or 15 Mn. ounces, were made during the last quarter of 1938, while the " tender " bills held by the Account were apparently at last replaced by " tap " bills, with the result that the rise of about £136 Mn. in " tap " bills was greater than the seasonal rise of about £100 Mn. in the Floating Debt, and "tender" bills fell contra-seasonally from £521 Mn. on October 1st to £488 Mn. on December 31st. In the first quarter of 1939 gold sales were on a much smaller scale, and the " tap " bill total showed little change[1]; but the seasonal decline in the Floating Debt, following upon the absence of the seasonal rise in " tender " bills in the previous quarter, brought the " tender " bill total down to £346 Mn. on March 4th, the lowest post-war figure on record, and occasioned an acute " bill famine ". After March 4th the Floating Debt began to rise in response to the high government expenditures, but for some time the increase probably did little to relieve the shortage; for the Exchange Account was obliged to sell gold fairly heavily in March and April in order to support the pound in the face of capital withdrawals inspired by the new international crisis, and seems to have invested the proceeds mainly in " tender " bills. The sharp rise in " tap " bills in June, at a time when gold sales were probably insignificant may have been due, at least in part to the replacement with " tap " bills of these " tender " bills held by the Account.

The net effect of the sale of gold during the year ending March 31st, 1939, was that the government was able to finance a considerable excess of rearmament expenditure over the loan of £80 Mn. raised in June 1938 to meet it, and in addition to repay about £142 Mn. of Treasury bills issued by " tender ". Since the purchase of the gold had been financed largely by long-term loans, the result was to reduce the " tender " bill issue to a figure well below that ruling before the gold purchases began. In view of the heavy government expenditure, the " tender " bill total is now rising rapidly. But even at the present rate it will not reach a normal seasonal level until the autumn. In other words, rearmament is still being financed out of the proceeds of the sale of gold bought in previous years out of long-term loans ; or, from another point of view, out of the long-term loans raised in previous years and invested temporarily in gold. The effects of this, and of other changes in the Floating Debt, upon the banking and economic position will be discussed in a subsequent article.

---

[1] The transfer of gold from the Bank of England to the Account and the re-valuation of the Bank's gold resulted only in transfers of " tap " bills between the Bank and the Account, and had no effect on the total.

Italian Finance and Investment[1]

By Bruno G. Foa and P. G. Treves

1. A number of new doctrines, some alternative and some complementary to each other, have been expounded in recent years in connection with the dynamics of contemporary markets. On the other hand, ever since the world slump of 1929, one country after another has felt compelled to tackle such problems as employment, the balance of payments, and investment. It was inevitable that some attempt should be made, sooner or later, to test the significance of some of the new analytical tools in the light of experience; and that this should in its turn lead to a re-examination of the assumptions on which the theoretical relationships in question are based. The institutional factor has also been brought into play. It is clear, in fact, that the varying degree of control exercised by the State has a bearing on the way in which, say, Mr. Kahn's multiplier or Mr. Harrod's relation can be expected to work, if at all. Besides, the quick transition which has taken place almost everywhere from the economics of unemployment to the economics of "bottlenecks" and rearmament, has introduced a host of new difficulties, although not without some compensatory simplifications. These are all very fascinating and far-reaching problems, which however go far beyond the limited scope of this article. We do not therefore propose to take sides in current controversies, nor is it even a question of what Professor Robertson would term an "incursion by an agnostic into the realms of theology".[2] We are simply concerned here with setting out a few facts about the trends of Italian finance and investment in the last few years, that is to say with one of the more interesting and thoroughgoing attempts at public control over the volume and direction of investment which are being carried out at the present

---

[1] A paper read in the Seminar of Economic Theory of the London School of Economics, on the 2nd and 9th June, 1939.

[2] *Economic Journal*, 1939, p. 356.

time. Whether, and, if this is so, to what extent Italy's economy bears some resemblance to a Keynesian world, or whether it exhibits some of the features, in connection with the mechanism of saving and capital maintenance, which have been made familiar by Professor Hayek and the " Austrian school ", it is left to the reader to decide. At all events, the recent trend of Italian national economy may possibly offer some guidance towards appraising both the effectiveness and limitations of some contemporary tools of economic analysis, under institutional assumptions which, although far removed from *laissez-faire*, and involving full-fledged State control, still fall short of collectivism, and involve a rich variety of degrees and shades in the technique of managed economy.

2. It is a matter of common knowledge that Italy, during the last few years, has been engaged in an effort almost unprecedented in her financial history. The world depression, the Abyssinian war and " sanctions " together with their aftermath, the drive for self-sufficiency and armaments, followed each other in quick succession, overlapping to a considerable extent in their sequence and effects. That the economic system of Italy should have stood such an emergency without apparent overstrain was due, of course, to the extensive degree of control gained by the State, and exercised both directly and through the corporative system, over the main variables of economic life, such as prices, wage-rates, investment, and the foreign exchanges. Fundamental changes were thus brought about in the economic structure of the country. Investment for private ordinary purposes was limited, whereas production for purposes of autarky and rearmament was rushed full steam ahead. Room was thus made for increased expenditure in the channels desired, so that fresh investment was, to a considerable extent, substitutive of, rather than additive to, ordinary investment.

3. It is almost inevitable, in view of the many similarities between the two systems, to be forced into some kind of comparison between Italy and Germany. Both countries, of course, adopted similar policies in connection with public works, rearmament, foreign exchanges, price and labour control. There were, however, many differences in degree, as well as in the technique adopted, e.g., to absorb unemployment and prevent price inflation. It is also to be remembered

that the Italian measures were spread over a greater number of years, and that changes, in general, were brought about more smoothly. Besides, the position of the two countries in the years, say, 1932–33, was different in more than one way. Italy had carried out her policy of great public works several years in advance of Germany, and her unemployment rate was lower. The monetary position was also technically easier for Italy, which had wisely kept her foreign borrowing within very small limits. On the other hand, Italy was far less well endowed with basic raw materials, such as coal, and did not possess the highly modernised industrial equipment[1] which was in Germany the legacy of inflation and American loans.[2] These latter facts incidentally explain why Germany, by putting into motion her reserves of unused productive capacity, was in a position to reach full employment in a few years, whereas the total elimination of unemployment in Italy has proved and is proving to be more difficult, and her productive level, although already involving a number of "bottlenecks"[3], lags still somewhat behind the full employment mark.

4. The world depression left Italy comparatively unaffected for a while[4], and hit the country with full force only towards the end of 1931, touching its lowest point in the years 1932–33. The Government had to step in to rescue the banking system, which was virtually illiquid (just as the German banks found themselves to be in the spring and summer of 1931) owing to the dead weight of its semi-frozen industrial assets, to revive production, and deal with unemployment. The latter was reduced by additional public works, and the available employment was spread over a larger number of heads by the introduction of a 40-hours working week. The banking system was thoroughly over-

---

[1] It must be pointed out, however, that the industrial equipment of Italy was already at that time very substantial, and quite up to date in many vital lines, such as electric power production, textiles (including rayon), motorcars, aircraft production, shipbuilding, chemicals and armaments. Since that time, enormous advances have been made, involving almost revolutionary progress in many lines of production.

[2] See C. Bresciani Turroni, *The Economics of Inflation*, 1937.

[3] See Annual Report by the President (Signor A. Beneduce) of the Istituto di Ricostruzione Industriale of the 28th April, 1939, where it was stated that many industries have adopted a three-shift schedule, and that shortage of hands is noticed in some lines of production.

[4] This time-lag is not difficult to explain. Italian economy was not closely interlocked with the vagaries of Wall Street, nor too much dependent on the purchasing power of the countries which are producers of "primary" agricultural commodities. The sudden stoppage of American lending also left her almost unaffected. Gradually, however, the decreased demand for her exports in almost every market and the worsening in the invisible items of the balance of payments (in particular, American tourist traffic) made themselves felt, and the country was brought within the vortex of the slump.

hauled, but on the other hand it had to give up its independence, and accept a considerable measure of public control. A number of public holding companies were either established or developed, some of them having been brought into existence soon after the war, and some dating from an even earlier period: first and foremost, the Istituto di Ricostruzione Industriale (known as the I.R.I.), originally modelled on the lines of the American R.F.C. and eventually developed into a permanent holding of industrial interests under State control, which took some of the great branches of the Italian industry under its wing. This state of affairs, although originally brought into being under the pressure of the crisis and of later emergencies, was found to be consonant with and agreeable to the broad aims and principles of the Fascist corporative order[1]. Thus, State control over banking and industry became a permanent feature of Italian national economy.[2]

5. Further problems had to be faced in the monetary sphere. It will be recollected that Italy had stabilised her currency, at the end of 1927, at the rate of 3·66 new lire for one pre-war lira, corresponding to an exchange rate of 92·46 lire per pound sterling as compared with the pre-war parity of 25 lire. Deflationary pressure had followed the stabilisation of 1927, to bring the system into equilibrium with the international position (and also because of the lower parity subsequently adopted by France), but was up to a certain point mitigated by an expansionist policy of finance in connection with public works and direct and indirect Government expenditure. The crash in the international price structure and the departure from the gold standard, first in this country and later in the United States, made deflation more acute, and weighed heavily on the trade balance. Foreign funds were withdrawn from the country, capital began to fly abroad, and the technical position of the Bank of Italy reserves quickly approached a critical stage. Gold and foreign exchange holdings, which stood at 9.6 milliards of lire at the end of 1930, were two milliards lower at the end of 1931, and fell to 5.8 milliards by the end of 1934. In the

---

[1] This was stressed by Mussolini himself, in a speech delivered at the Capitol in Rome, on the 23rd March, 1936, in which he laid down the principle that all key production had to be brought under State control.

[2] At the end of 1938 the I.R.I. alone had control over assets to a value of 20 milliards of lire as follows: (*a*) 9 milliards, value of the fixed and working capital of industries controlled by the I.R.I; (*b*) 9 milliards, loans either by the I.R.I. or by I.R.I.-controlled banks; (*c*) 2 milliards, Government securities.

spring of 1934, exchange control was established, and in December of the same year foreign securities and balances belonging to Italian nationals were made liable to transference to the Treasury. Foreign exchange dealings were monopolised by a Government Exchange Control Department. This had been prefaced on February 15th by the establishment of a general licensing system of imports, which has been maintained ever since.

6. The period from October 1935 to May 1936 was covered by the Abyssinian war and " sanctions ". Government expenditure jumped at once to a war level. Imports, except for vital military supplies such as coal, oil, etc., were drastically reduced, and exports fell considerably. War and sanctions were soon over, but, under the stimulus of both, and of the political developments which followed the Abyssinian war, the drive towards autarky gathered enormous strength, and the pace of rearmament was further accelerated. On the 5th October, 1936, following the devaluation of the French franc and the dissolution of the so-called " gold bloc ", the gold parity of the lira was reduced, and the parity with the pound sterling and the dollar brought back to the levels of 92.46 and 19 adopted in 1927.

7. Table I gives the figures of total Government expenditure and revenue for the various financial years from 1931–32 to 1937–38.[1]

TABLE I

BUDGETARY EXPENDITURE AND REVENUE, 1931–32/1937–38.
(milliards of lire)

	1931–2	1932–3	1933–4	1934–5	1935–6	1936–7	1937–8
Expenditure..	23·1	21·7	24·4	20·8	33·0	40·9	38·6
Revenue	19·3	18·2	18·0	18·8	20·3	24·7	27·4
Difference	−3·8	−3·5	−6·3	−2·0	−12·6	−16·2	−11·1

It will be gathered that the increase in expenditure has been continuous, involving a cumulative deficit over these seven years of 56.3 milliards, of which 40.1 was in the last three years. This stupendous increase in expenditure was met: (*a*) by increases in taxation; (*b*) by some windfall revenues, such as the profit on the writing up of the gold reserve of the Bank of Italy after the devaluation of 1936, and substantial

[1] The financial year runs in Italy from the 1st July to the 30th June.

voluntary offerings of gold during the sanctions period; (*c*) by an operation of loan conversion originally meant to reduce the burden of the Funded Debt from 5 to 3½ per cent., which was followed after a little while by a re-conversion from 3½ to 5 per cent., against payment of an additional 15 lire for every 100 lire of 3½ per cent. loan already held; (*d*) by a compulsory loan on real estates, coupled with a special levy spread over 25 years; (*e*) by an increase in the floating debt, in its various forms. Details as to these items will be found under Appendix I. It will be seen that the various measures adopted imposed all-round sacrifices on practically all classes of taxpayers. They were also supplemented by a number of enactments stabilising prices, house rents, etc., and by conversion operations on mortgage and other long-term loans and bonds, which affected important classes of income-receivers.

8. In order to ascertain, as far as possible, the ratio between ordinary revenue and National Income, on the one hand, and public borrowing and saving capacity of the market on the other, it may be simpler to confine our attention to the last three years, namely those from 1935-36 to 1937-38. During this period, ordinary revenue increased with respect to the previous years by an average of 5 milliards per year, windfall items accounted altogether for about 3 milliards, and borrowing increased by some 40 milliards of lire, namely at a rate of about 13.5 milliards per year. Recent estimates of the Italian national dividend are not, unfortunately, available.[1] The latest known estimate, made by Professor Mortara, gave a figure between 85-90 milliards for the year 1928.[2] All that we can do is therefore to attempt a rough guess of the present position as compared with that of 1928. In view of the increase in population and of the monetary devaluation of 1936, there would appear to be some *prima facie* ground for believing that the present figure should be somewhat higher, seeing also that productivity per head has probably increased. On the other hand, the monetary " alignment " of the lira to the pound sterling

---

[1] However, a somewhat summary estimate carried out by B. Barberi (*Economia Italiana*, April, 1938), gives for 1936 a total of 86 milliards of lire. The first instalment of a paper on Italian Wealth and National Income in 1936-37 by A. Degli Espinosa has been published in *Economia*, May, 1939, but it does not disclose as yet the estimate for the National Income.

[2] This total may strike some readers as extremely low, in comparison, e.g., with the figure of the National Income in this country. It is easy, however, to point out that comparisons of national dividends as between different countries in terms of money are apt to be misleading, as they convey no information at all on the comparative purchasing power of a money unit of income per head, which is obviously greater in comparatively poorer countries.

carried out in 1936 was at the time a compensatory measure to the existing overvaluation of the lira, and did not lead to increased incomes.[1] There were, of course, price increases, in connection with the higher prices of imports (although this was to some extent mitigated by reductions in customs duties), but as total quantities of these were strictly rationed the all-round effect was not in itself inflationary. On the whole, the statistical and other evidence available, although rather sketchy, seem to point to the conclusion that the Italian national dividend in the last year or two has presumably reached the peak of 1928, but has not risen further. In fact :

(*a*) The wholesale and cost of living price indexes for 1938 lagged still somewhat behind the base value (=100) of 1928, standing at 95.3 and 99.12 respectively. Only in the first quarter of the current year has the index of the cost of living reached 100.50, with the wholesale index still at 97.4.

(*b*) The index of industrial occupation had already in 1935 caught up the level of the base year 1924, improving steadily ever since (the figure for 1937 has been 104.46, and for 1938 110·70). On the other hand, the index of aggregate hours worked in each year gives even for the last two years a lower value than for the base year 1929, standing at 91.74 and 95.48 respectively. The actual volume of employment, as distinguished from the numbers of people employed, is not therefore to-day greater than it was in 1928–29.

(*c*) The industrial wage-bill, which stood at 11.1 milliards of lire in 1929 and slumped down to 7.4 milliards in 1932, increased to 7.7 milliards in 1935 and 8.2 in 1936 (the latest year for which statistics are available).[2] Since that time, two all-round increases of the average of 10 per cent. each have been granted in wage-rates, so that the total to-day, on the basis of the 1936 level of employment, would stand at about 9.9 milliards.

---

[1] The suggestion made by Mario Mazzucchelli senior in the *Rivista Bancaria*, February, 1939, to the effect that the value of the present National Income of Italy could be arrived at by increasing the figure for 1928 by 40.9 per cent., which is the rate of devaluation adopted in 1936, appears therefore to be altogether unplausible.

[2] These figures, as well as most of the statistical material of this article, are taken from a remarkable recent volume published by the Bank of Italy under the title *L'Economia Italiana nel Sessennio 1931–1936*, Rome, 1939. The publication of official statistics on foreign trade, bank returns, etc., which had been temporarily withheld at the time of the Abyssinian war, has since been resumed, so that all figures given here are available in the *Bollettino Mensile* of the Istituto Centrale di Statistica. Others are printed in the Appendix to the Annual Reports of the Governor of the Bank of Italy.

Further allowance must be made for the increased employment since that date, but even so we are still left somewhat below the figure for 1929.

(*d*) Agricultural employment, which engages nearly one half of the active population of the country, has been on the whole steady over the last few years. Prices of home-grown crops (wheat, maize, rice, hemp, and other staple products) have been as far as possible protected, being fixed on the eve of the harvests by corporative committees. The purchasing power of agriculture as a whole has been therefore improving year after year, recovering from the depths of depression touched in 1932–33. However, the prices of practically all agricultural products are still lower than they were in 1928. The agricultural wage-rate index, which had fallen very low in 1934, stood at 73.0 only (base year: 1928=100) for 1936. Even including the two 10 per cent. increases (which probably have not been so general in agriculture as has been the case with industry), we are still behind the 1929 level.

(*e*) Incomes of interest-receivers have fallen, as a sequel to the decline in interest rates, and to the various conversion operations on mortgage loans and bonds.

(*f*) Incomes from rent on both land and town properties have been twice reduced and then kept steady by the legal enactments already mentioned.

(*g*) It must be admitted that during the last 4–5 years some windfall profits have been earned by some groups of entrepreneurs, both at home and in East Africa. But, as will be pointed out later, extra taxation and other measures have kept this factor within moderate limits.

To sum up, it may be estimated that the national dividend, which had sunk in the years 1932–33 to an extremely depressed level, has substantially increased ever since, as a result of increased industrial employment and of greater output and better prices in agriculture, recovering probably up to the pre-crisis level. Analogy with the trends which have taken place elsewhere, e.g., in Germany,[1] supports this conclusion, so that we can take a figure of, say, 90 milliards as indicative of the national dividend to-day (and a slightly lesser one for the average of the last three years). Picking up the thread dropped at the beginning of this paragraph, we are now in a position to say that an average tax yield of 22.5 milliards involved a considerable burden per head, and a measure of sacrifice to the Italian taxpayer at least as large as that laid on his British " opposite number ".[1]

---

[1] See T. Balogh, *Economic Journal*, 1938, p. 466, and C. W. Guillebaud, *The Economic Recovery of Germany from 1933 to the Incorporation of Austria in March, 1938*, London, 1939.

9. As to the flow of fresh saving which is yearly available out of the national dividend for net investment, one can perhaps, in the absence of reliable estimates, put it at about 10 per cent. of total income, and probably even more, in view of the frugality and saving propensities of the Italian population. This would give a figure of, say, 9 or perhaps 10–11 milliards per year available for fresh investment, which is also the figure suggested by Professor Demaria in a recent article.[2] So far as the last 3–4 years are concerned, fresh savings have been authoritatively estimated[3] at an average figure of 12 milliards, with a peak of nearly 16 milliards in 1936; and the present rate of saving is put by the Italian correspondent of *The Economist* as high as in the neighbourhood of 18 to 20 milliards.[4] What is meant by " saving " in these contexts is not always clear. However, if we add up a number of items such as net increases in the share capital and reserves of limited liability companies, the net total (namely, new borrowing less repayments) volume of fresh public loans, Treasury bills and bonds floated by public companies—less the known advances made by the banking system against subscriptions to same,[5] and increases in Post Office and bank deposits and saving certificates, we get somewhere in the neighbourhood of Senator Volpi's figure.[6] To the extent, however, to which

---

[1] The ratio of tax-yield to national income seems in fact to be pretty close in the two countries, and indeed higher for Italy. It is hardly necessary to point out, however, that comparisons in measures of financial sacrifice among different countries involve at least as many pitfalls as those in national incomes.

[2] In *Giornale degli Economisti*, October, 1938.

[3] By Senator G. Volpi, President of the National Confederation of Italian Industrialists, in a broadcast address given last April.

[4] *The Economist*, June 24th, 1939, whose main conclusions closely agree with those independently arrived at in this article. The figure of 18–20 milliards seems, however, too high, even for *gross* saving.

[5] These are, unfortunately, available only in connection with the reconversion operation of 1935 and the loan on real estates of 1936. Returns of the total advances on securities granted by the Bank of Italy as well as by all deposit and other banks are regularly published, but these include advances on *both* fresh and old securities. At all events, they are of great interest, and some use will be made of them later.

[6] Let us take, for instance, the year 1936. The volume of net new share issues (n.b. allowance being made for capital reductions and losses) and increases in reserves of limited liability companies was 3.6 milliards of lire. Public loans and bonds were issued to a total of 4.6 milliards. New Treasury bills for 2 milliards were floated. Post Office new saving certificates and deposits stood at 2.6 milliards, and bank deposits leapt up by 5 milliards. This gives an all-round total of 17 milliards, from which 2.8 milliards are to be deducted, being bank advances towards subscriptions to public loans. We are thus left with 14–15 milliards, which perhaps involve some additional double counting, but do *not* include the increased reserves of business other than limited companies.

advances towards new loans and Treasury bills have been made by the banking system, and to which Government securities have not wholly been absorbed by the market but have been left in the hands of the banks, any such computation is likely to involve some double counting. What is more important, whereas the estimate of 10–12 milliards refers to some sort of normal *net* saving capacity of the market on the basis of a national dividend in the neighbourhood of 90 milliards of lire, it is not at all sure that the extra saving which has been actually made available during the last three years can be considered wholly net, in the sense that it allows for the full maintenance and replacement quotas of the existing equipment. At all events, seeing that Government borrowing alone in the three years from 1935–36 to 1937–38 averaged 13.5 milliards of lire per year, it is clear that this, together with the finance of investment for purposes of rearmament and self-sufficiency, besides absorbing the whole of the fresh available supply of saving, involved a considerable transfer of saving from alternative uses. The accumulated saving resources of the country were, so to say, pooled together, and drafted into the service of the twin aims of the national economy of the country.

10. It would be of some interest, if space were available, to enter in detail into the various methods by which the financial requirements of industry, in connection with armaments and the plans for autarky, have been met. It will suffice to say that these funds were provided for: (*a*) out of grants included in ordinary budgetary expenditure, on an average (for the whole period 1932–38) of 1.7 milliards per year; (*b*) through bond issues by the I.R.I. and other similar institutions[1]; (*c*) by advances from the Bank of Italy and its special branches dealing with industrial investment (mainly the Consorzio Sovvenzioni su Valori)[2]; besides this, the policy of valorisation of staple agricultural products,

---

[1] In addition to the I.R.I., mention must also be made of the I.M.I., namely the Istituto Mobiliare Italiano, which was created in the crucial year 1931 as an institution for credit to industries. The I.M.I. grants medium-term loans to industries, against which a corresponding volume of bonds is sold to the public. Although very conservatively managed, the I.M.I. has carried out so far bond issues and corresponding loans for very substantial amounts. Nor should the part be overlooked played in the finance of both public works and investment of national interest by the powerful insurance companies, of which one (the Istituto Nazionale delle Assicurazioni) is under State ownership.

[2] As a central bank, the Bank of Italy does not, of course, engage in operations of credit to industry. Soon after the Great War, however, it was called to take over a large volume of industrial assets (as a sequel to the crisis of 1921), and the Consorzio Sovvenzioni was created. Its connections with the I.R.I. are also very intimate.

and land reclamation and improvements, also involved large commitments. These were provided for partly out of the estimates of the Ministry of Agriculture, and partly through a number of specialised credit institutions.

11. Charts I and II, and the tables printed under Appendix II, may be of some assistance in appraising the effects of the trends in finance and investment just outlined on circulation. Chart I includes changes, over the period 1930–38, in: (*a*) gold and foreign exchange reserves of the Bank of Italy; (*b*) note circulation and outstanding cheques drawn on the Bank of Italy; (*c*) aggregate loans and advances of the Bank of Italy; (*d*) bank deposits. Chart II shows how the increase in bank deposits of the last 8 years has been apportioned between saving banks on the one hand, and Post Office Saving Deposits and Post Office Saving Certificates on the other. Detailed figures, together with some others relating to the operations of the leading institutions for credit to industry and public undertakings (I.R.I., I.M.I., Consorzio Sovvenzioni, Consorzio di Credito per Opere Pubbliche, Istituto di Credito Navale, etc.) and agriculture, are given in Appendix II. The markedly upward tendency of all advances is unmistakable and points a very definite finger to the process of extremely active credit expansion which has taken place. On the other hand, the note circulation, although considerably increased between 1934 and 1937, has been kept within moderate limits. This fact supports the contention, which will soon be argued, that the increased investment over the period under examination has not brought about a proportional increase in wage-goods consumption, the note circulation being, of course, a rough index of the latter.

12. So far as changes in bank deposits are concerned, it will be noticed that total deposits have leapt up by well over 8 milliards in the single year 1936, by 5 milliards in 1937, and by nearly 6 milliards in 1938. Deposits with commercial banks have remained almost stationary, whereas those in saving banks, and Post Office Saving Banks, which have offered throughout very attractive terms to depositors, have shared between them the benefit of the whole increase. Such a huge increase in total bank deposits, at a time when the market had also to absorb an almost unprecedented volume of Government bonds, is clearly connected with the Government borrowing policy; in particular, with the liberal advances

CHART I

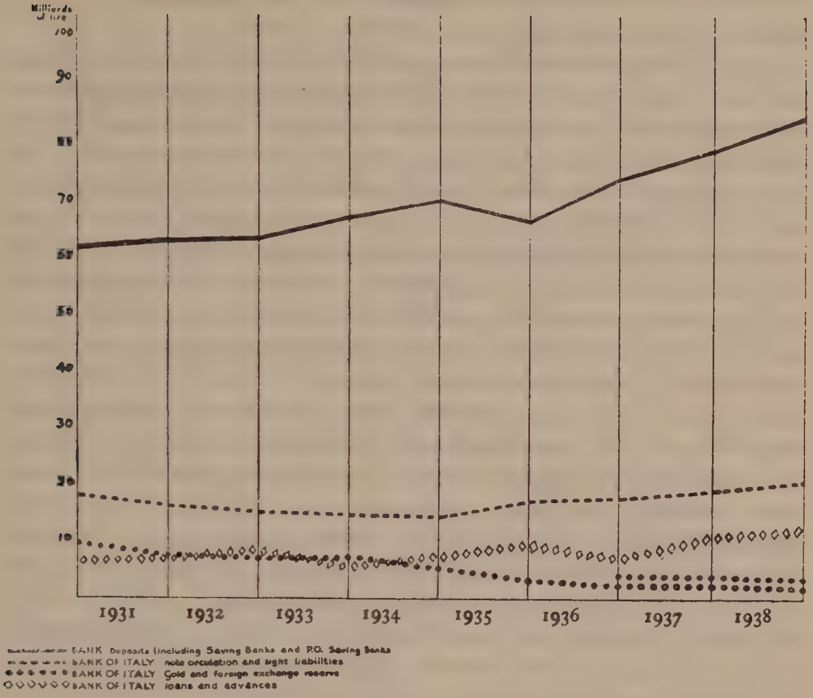
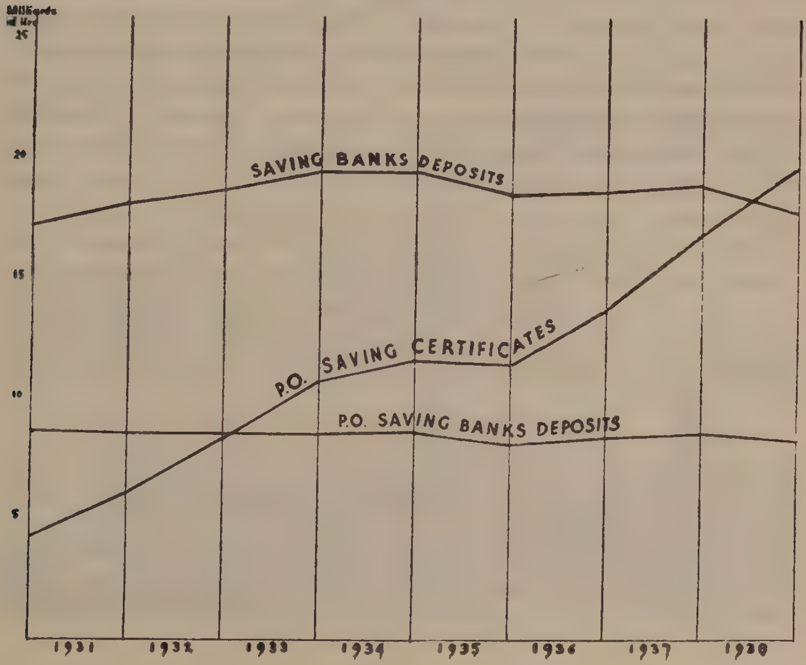


CHART II



made by the banks on the collateral of Government securities, and towards subscriptions to public loans.

13. The trade balance, together with the invisible items of the balance of payments, is, of course, a factor of paramount importance in conditioning the success of the policy which has been adopted.[1] Exchange control has been very effective throughout the last five years, and imports have been limited to the bare indispensable. On the other hand, some of the investments involved by the East African Empire and by the drive for autarky, the laying up of stocks of vital supplies, such as wheat and oil, and the requirements themselves of the new industries, have made it imperative to have recourse to fairly substantial imports. This led in its turn to a fresh drive for exports and, in view of the greater elasticity of the international demand for Italian exports as compared with that of the Italian demand for imports from abroad, inevitably brought about a worsening in the terms of trade.[2] Far-reaching schemes have been adopted, and are being carried out by corporative bodies, to foster exports, involving a considerable degree of subsidies, etc. However, no recourse has been had to the objectionable methods adopted by some other countries.[3] A number of clearing agreements have been negotiated, and are working with a varying measure of success. Trade on a barter basis and on so-called " bilateral " arrangements covers nearly two-thirds of Italian foreign trade, and contraction in some directions has been to a certain extent made good by expansion in others.[4]

The behaviour of the Italian balance of trade since 1934 will be apparent from Table II.

TABLE II
ITALIAN BALANCE OF TRADE
(milliards of lire)

Year	Excess of imports over exports (including exports to colonies)	Excess of imports over exports (excluding exports to colonies)
1934	1·4	1·5
1935	2·5	3·1
1936	0·4	2·0
1937	5·7	8·0
1938	2·9	5·1

---

[1] This has also been pointed out, with reference to Germany, by Mr. Balogh, *loc. cit.*

[2] See *Economist*, 24th June, 1939, *cit.*

[3] It must also be mentioned that the service of Italy's foreign debt has been regularly met throughout.

[4] Trade with Germany has increased during the last few years very considerably, reaching a figure (values of both imports from and exports to) in excess of 5 milliards of lire for 1938.

As to the balance of payments, net changes in gold reserves of the Bank of Italy are, up to a point, indicative of its behaviour. We say up to a point, because the Treasury has had available throughout the period the proceeds of the foreign exchange balances and securities handed over by Italian investors, no figures for which have been officially disclosed, and the gold offered by the public. So far as the more recent developments are concerned, some light has been thrown on them by the Minister for Foreign Trade and Exchanges, Guarneri, in a statement to the Italian Upper House delivered on the 26th May of this year. It is understood that in 1937 the deficit of well above 5 milliards in the trade balance of the country was entirely met, so that no gold export out of the Bank of Italy reserves took place. In the year 1938, with a deficit in the trade balance below 3 milliards, there was a gold loss of 202 million lire. In the first 4 months of the current year, despite a great improvement in the position of the trade balance, the balance of payments has not reached equilibrium. The fall in tourist trade is held responsible for these fresh difficulties.

14. There can be no doubt as to the fact that the consumption multiplier during the last few years has been kept deliberately low (there have also been changes in the qualities of the articles released for consumption) and that the increased investment (although associated, especially between 1932 and 1933), with an increase in wage-goods consumption, has taken place to a considerable extent at the expense of what, under different conditions, would have gone to increase consumption.[1] A number of powerful factors have been brought into play in that respect. First, the stoppage of all non-essential imports has resulted in increasing the price of a great number of articles of consumption manufactured with foreign materials; and, since the money purchasing power in the hands of wage-earners has not kept pace with those increases, limitations in consumption have taken place. Second, the higher cost and price of many

---

[1] There has been some discussion in recent literature (Bresciani-Turroni, Balogh) as to whether "multiplier" effects have been in operation in Germany, or just the reverse. So far as Italy is concerned, it may be suggested that the multiplier effect was operative up to a point, in connection with the outlays for public works and (partly) for the Abyssinian war. Rearmament and autarky on the other hand, have brought about a gigantic expansion in investment goods, working, so to say, the other way round. The normal relation between investment and consumption goods has been altered in favour of the former. Without doubt, this is no longer a Keynesian world, and we are confronted with the economics of Professor Spiethoff and Professor Hayek.

home-made articles in comparison with prices of foreign competitive goods which have been kept out of the market has worked in the same direction. Third, the limitations set on the distribution of dividends, and increased taxation, have prevented the profits admittedly earned by some sections of the entrepreneurial class from swelling the demand for consumption goods. Fourth, there has been a decline in the production of durable consumption goods, such as houses.[1] It is also plain that taxation, in view of the channels through which Government revenue was spent, had on the whole deflationary effects.

15. Strict control was and is also being maintained over ordinary industrial investment. During the slump of 1932–33, a very important provision was enacted, subjecting the establishment of new industrial plants, as well as extensions in existing ones, to licence. This was originally intended to prevent undue excess capacity, but turned out to be a very powerful weapon for checking investment in undesired directions. Also, increases of share-capital above 1 million lire, and issues of bonds and debentures, were made subject to a permit by the Treasury. Ordinary investment was thus effectively restricted.

16. The fact that both the wholesale and retail price indexes have substantially increased during the last three years, and the already noted expansion in various indexes of circulation, raise once more the issue whether inflation has not taken place. We have already stated that, in our view, there has been no such thing as income inflation. Price increases are to be explained essentially (although not exclusively) in connection with the rationing of imports, which has driven up the prices of certain raw materials far above the differentials explained by the new monetary ratio adopted in 1936. It seems very likely that ultimately the price system will have to be readjusted to a higher level, and recent wage increases (the latest has taken place in March) point in the same direction; but there are no grounds for fearing that a vicious circle should be expected from the income side. There have been some signs of profit inflation, but these have been kept within fairly narrow limits. What on the other hand is difficult to assess is the ultimate significance of the huge amount of investment for special purposes

---

[1] New housing has had a very serious setback in the last two years, dropping from a peak figure of 433,250 new units of floor space built in 1936 to 325,784 units in 1937 and 218,704 units in 1938. The figure for 1936 was, however, abnormally high, on special grounds.

brought into existence in the last few years. This, the level of public expenditure, the credit expansion, and the influence of all these factors on both past accumulation and future saving capacity, might conceivably, although not necessarily, lead to some sort of cumulative process, in the event of some of these factors—in particular, public expenditure—getting out of hand.[1] However, should the expansionist tendencies be held in check, and the system given a spell of breathing space, it ought not to prove impracticable to reach a position of equilibrium at a somewhat higher level of National Income in terms of money, higher prices, and higher tax yield, involving, in real terms, the maintenance of the present level of real incomes (although probably not without the writing off of some of the extra investment of the last few years).

17. Some readers may have been puzzled by the lack of reference, so far, to the rate of interest. The omission is to be explained by the fact that the rate of interest has hardly played an independent part at all in the expansion of investment in Italy in the last few years. On the other hand, a skilful management of the structure of interest rates has been required in order to secure the optimum desired distribution of savings, and this is worth a few remarks. As far as the average level of the interest structure was concerned, the Italian authorities followed the path almost universally adopted in the last eight or nine years, aiming at a reduction, first, and then at the stabilisation of the interest rates. The official discount rate of the Bank of Italy, which stood at 5½ per cent. in the summer of 1931, and had subsequently been raised to 7 per cent., was reduced to 6 per cent. in the spring of 1932, to 5 per cent. two months later, to 4 per cent. at the beginning of 1933, to 3½ per cent. in the autumn of that year, and to 3 per cent. in December, this being the lowest rate ever touched in the history of the Bank. Such a rapid downward trend was, of course, intimately connected with the preparations for the conversion of the Funded Debt eventually carried out in 1934. It was accompanied by great reductions in the rates on bank deposits, but the decline in the rates on bank advances did not keep pace (also allowing, as one has to, for the ordinary differentials between discount rates and rates on advances). Besides, the psychology of

---

[1] It is clear, in fact, that the consumption multiplier cannot be compressed abruptly, and that re-absorption of extra incomes through taxation involves some time-lag.

investors and the growing needs of the Exchequer stood in the way of reductions in rates and yields beyond a certain point. A level of 3—3½ per cent. was under the conditions impracticable, and rates had to be stiffened. The Bank rate was accordingly raised to 4 per cent. in November 1934, and again (after a short new spell of 3½ per cent.) to 4½ per cent in the autumn of 1935 and to 5 per cent. one month later. In the spring of the following year it was reduced to 4½ per cent. at which figure it has been standing ever since. Yields on Government securities returned again to their traditional level of about 5 per cent. On the other hand, interest rates on bank deposits went down further, while those paid by Post Office Saving Banks and P.O. Saving Certificates were kept high, bringing in an element of discrimination which powerfully assisted the needs of the Treasury and the issue " on tap " of Treasury bills.[1]

It is to be noted that the significance of Bank rate in Italy, during the period under discussion, has been very restricted and, in view of the negligible role of the open market, its main role has been that of an " announcement rate," foreshadowing the lines of development favoured by the authorities. On the other hand, the rate charged by the Bank of Italy on advances against public securities has been of the greatest significance, and was indeed the mechanism which made possible both the unprecedented expansion in the Government's Floating Debt and the stabilisation of the rate of interest on the same. It has been in fact the consistent practice of the Bank of Italy to grant advances on Government securities at rates equal to, and even lower than, those carried by the securities themselves ; and it is clear that unless this policy had been accompanied by some all-round rationing, practically the whole of the fresh Government borrowing at the hands of the market would have gone to increase, up to 80 or 90 per cent. of its face value, the advances of the Bank.

As to the cost of new capital for the industrial expansion of the last few years, recourse to the I.R.I. and the other institutions for industrial credit has enabled new extensions to be financed at very reasonable rates. It is stated in the

---

[1] It is obvious that such a discrimination in favour of interest rates charged by Post Office and other " Departmental " institutions would have been impracticable if the authorities had not been in a position to control the ordinary banking system. On the other hand, the practice of borrowing from the " Departments " does not differ from that adopted in this country. See Mrs. Hicks' *Finance of British Government.*

Annual Report of the I.R.I. for 1938 that the average rate paid by the I.R.I. during the year on the capital resources raised by them was 4.31 per cent., and that, on the other hand, the yield of their industrial investments (which can be taken as a rough index of what industry had to pay) was 5 per cent., and—excluding those which did not pay their way—6 per cent.

18. To sum up: so far as the past history of the last four years is concerned, it is not difficult to form a comprehensive picture of what has been taking place. In fact, it is clear that in a country where a position of full employment has not been reached, there is considerable room for expansion in the national dividend and the saving surplus. It is clear, further, that saving capacity can be increased, in the short period, at the expense either of consumption or of (*a*) the present maintenance; (*b*) future replacements of the existing equipment—or both. And it is also plain that credit can be expanded in anticipation of future income and associated saving. Whether this ultimately leads to a permanent expansion or to the shrinkage of the normal national income in terms of physical units depends of course on the long run productivity of the extra-investment involved; while the ultimate " psychic " income is a function of (*a*) both (1) the volume and (2) the composition of the dividend in physical units; and (*b*) the preference scales of the public, involving comparisons, so far as practicable, between economic and non-economic welfare (including considerations of security, national prestige, etc.). With those far-distant issues we are not here concerned. It will be sufficient to say that, in our opinion, all the factors just mentioned, namely (1) an increase of saving due to increased income, and intensified by the high propensity to save of the market; (2) a somewhat " induced " compression of the consumption multiplier; and (3) considerable inroads on the maintenance and replacement quotas of existing equipment,[1] have been and are operative in Italy. That, to a considerable extent, new investment has been " substitutive " and not additive, in real terms, seems to us beyond any doubt; and this is why, within those limits, Italy appears to have undergone a process of reflation, carried out with considerable ability and success. On the

---

[1] It is to be noted that revolutionary technical progress in industry leads necessarily to the need for greater amortisation quotas, because of the quicker economic obsolescence. Also " user costs " are, of course, higher in an economy of full capacity.

other hand, some signs of strain on the saving capacity of the market have been apparent in recent times, and are reflected in the latest indexes of circulation. This seems to point to the fact that, in addition to mobilising its unused saving resources, the country has already expanded its investment and public expenditure in such a way as to eat up some of the saving capacity of the following years. Yet, the plans for autarky foreshadow heavy financial requirements,[1] in addition to those of the Government. Some readjustments among the various aims which are being pursued at the present time, and the relative economic values, are likely therefore to take place. The immediate future, however, rests of course on factors which are beyond the province of the economist.

Appendix I.

1. It will be recollected from what has been said above that the average extra yield of taxes during the last three financial years has been 5.3 milliards per year. This was made possible by (*a*) the extra yield of some of the existing taxes; (*b*) increases in the rates of some taxes; and (*c*) new taxes. The increase in the all-round burden of taxation was thus considerable; but it was mitigated by a policy of liberal advances adopted by the banking system, devised to spread over a number of years the effects of the extra burden.

2. The pillar of Italian direct taxes is the "imposta di ricchezza mobile", which, although not a personal tax, bears a very close resemblance to English income-tax, and is supplemented, for all incomes in excess of 6,000 lire per year, by a "complementary tax" on personal income. These two taxes have been left untouched throughout. There have been increases in the bachelors' tax, but this is not of great importance, and can be passed over.

3. The first new tax raised at the beginning of the Abyssinian war was a tax of 10 per cent. on the dividends of all bearer securities, with the exception of Government securities. At the same time, limited liability companies were instructed to invest in Government securities their profits in excess of 6 per cent. on their capital and reserve; and this

---

[1] Various estimates have been put forward of these requirements. Professor Demaria (in the article above quoted) reckons that some 20 milliards will be required in the next few years. Signor Beneduce, in his report already quoted, points out that the bulk of investment for purposes of self-sufficiency is still to be carried out.

measure, in addition to preventing income inflation, had also the purpose of creating a reserve of taxable capacity, which was in due course exploited. In fact, after the war, an excess profit tax was put on limited companies, at varying progressive rates up to 60 per cent. (eventually reduced to 30 per cent.). At the same time, the compulsorily invested dividends were released, and made available for distribution or reinvestment.

4. A very peculiar measure which was subsequently adopted was a compulsory loan on real estates, coupled with an additional tax on the income of all immovable properties, devised in such a way as to provide the State with the funds for the service of interest and amortisation (over 25 years) of the loan. In other words, owners of land and real property were called upon to make a loan to the State up to 5 per cent. on the net taxable value of their assets, and at the same time to provide the State with the funds for meeting the payments of interest and repayment of principal. Various alternative options were given to the taxpayers, and " redemption " of the loan by the subscribers themselves was encouraged by a bonus of 10 per cent. on the amount to be subscribed, provided the loan certificates were then surrendered to the State which, on its part, exempted the subscriber from payment of the 25 years tax. The yield of the loan was roughly 5.7 milliards, including 1.1 milliards for payments for redemption. The leading importance of the role played by the banking system in this operation is emphasised by the fact that out of 4.6 milliards of loan subscribed no less then 2.8 milliards, namely over 61 per cent., was advanced by the banks.

5. A year later, an extraordinary levy was imposed on the capital of limited companies, at a rate of 10 per cent. on the market value of their share capital plus accumulated reserves at the 5th October 1936, which was the date when the " alignment " of the lira was effected. The Central Bank and most other banks (namely, those under State control) were exempted, and alleviations, amounting in some cases to exemption, were introduced to take into account the position of those companies that were operating at a loss. Payment was spread over 30 months from March 1938, but encouragement was given for immediate payment of the whole, in the shape of a 6 per cent. compound discount bonus. Shares dealt in on the Stock Exchange were accepted by the

Exchequer in payment. The banking system was again brought into play, as special 4 months' bills were declared eligible for discount direct with the Central Bank (at variance with the provisions of the Bank Act of 1936) provided that their proceeds were used in payment of the tax. The total amount advanced has not been published, but is stated in the Annual Report for 1938 of the Governor of the Bank of Italy to have been considerable. Companies which were unable to meet the tax out of their accumulated reserves were required to set aside a special reserve in future years, up to the full amount of the tax. To simplify the financial problem of the companies, these were permitted to write up the value of their plants and assets (an operation which was held to be justified by the monetary devaluation which had taken place), and distribute bonus shares up to the limit of twice the tax to be paid, subject however to the proviso that a fresh capital issue had to be made up to one half the value of the bonus shares distributed. It will be seen therefore that companies were able to raise their tax requirements partly by writing up their capital and partly by fresh issues, within the limit of three times the amount to be paid. The full yield of the tax is not yet officially available, but has been estimated at 4.5 milliards, of which 2.8 were paid immediately. Companies wrote their capital up by 6.6 milliards of lire, of which 2.1 was covered by bonus shares.

6. Business and firms other than limited companies were eventually subjected in their turn to a capital levy, in 1938. The main technical difficulty with respect to these was to segregate as far as possible the capital from the entrepreneurial activity as distinct sources of income, and it was roughly met by exempting all business having an ordinary taxable income below 10,000 lire and by a system of rebates. Taxable capital values were arrived at by capitalising income (taxable for ordinary purposes) at the rate of 8 per cent. The rate itself of the tax was 7.50 per cent., with the limitation that in no case should the amount of the tax exceed five times the amount of income-tax payable by the firm. Three years were given for payment, and redemption was encouraged by a 5 per cent. compound discount rebate. The assistance of the banking system was once more made available. The expected yield of the tax has been estimated at 1.5 milliards.

7. Turning to taxes on consumption, and indirect taxes

generally, new excise duties were established, or existing duties raised, on artificial textile fibres and alcohol, to make good the loss of customs revenue deriving from the restriction of imports. A tax on goods transported by road was also imposed in 1935, and the tax on petrol was subject to several changes. Some of the taxes on business turnover were increased.

8. The various sources of ordinary revenue are grouped in Italian public accounts under four classes, namely: (1) Direct Taxes, such as Income Tax, Complementary Tax, Real Estate Tax, etc.; (2) Turnover and Business Taxes, Stamp, Estate and Death Duties; (3) Taxes on Consumption (Sugar, etc.); (4) Revenue from Monopolies (Tobacco, Salt, National Lottery, etc.). Roughly speaking, classes (3) and (4) are indicative of the burden put on the consumers. It may be of some interest to compare the relative increase in each of these four groups between the average yield of 1931–35 and that of 1937–38. These were 38 per cent., 26 per cent., 32 per cent. and 15.6 per cent. respectively, which, roughly speaking, seem to point to an equitable distribution from the viewpoint of the consumers.

9. Let us now deal briefly with borrowing, beginning with the Funded Debt. Two large-scale operations were carried out by the Treasury, in 1934 and 1935 respectively. Taking advantage of the easy conditions of the money market (arising, as has been mentioned above, out of open market operations) the Treasury carried out in the spring of 1934 a remarkable conversion operation of 60 milliards 5 per cent. Consols into a 3.50 per cent. Redeemable Loan, having a maturity of 45 years. This operation was very successful, but it did not involve any immediate relief to the Exchequer, just the opposite, as the Government paid to those who took advantage of the conversion a sum equivalent to 4.50 per cent. for each 100 lire, to make good the difference between 3.50 and 5 per cent. over 3 years, as the Consols were by law inconvertible before 1937. To make conversion attractive, a large number of prizes, to a total of 600 millions, were drawn and distributed. The Bank of Italy was instructed to grant advances on the new loan certificates at a rate half a point below the official rate of discount, which, of course, proved an extremely attractive proposition. The potentially inflationary effect of the payments (which reached 3.4 milliards) made in connection with the conversion by

the Exchequer was offset by sales of 4 per cent. nine-year Treasury bonds, and by the issue of debentures by a public holding company, on behalf of the State Railways.

10. The second large-scale operation on the Funded Debt was, so far as we are aware, altogether unprecedented. It consisted in an offer of reconversion of the 3½ per cent. Redeemable Loan into 5 per cent. Rentes, involving the payment of 15 lire for every 100 lire of nominal capital already held in Redeemable. This new loan was also offered to the general public, at the price of 95. As the market price of the 3½ per cent. stood at that time at 78, an extra inducement of 2 lire was thus given to reconversion. The new Rentes also enjoyed the privilege of being eligible for advances below bank rate. The operation proved very attractive, as investors obtained no less than 10 per cent. on the fresh funds lent. The amount converted was 41 milliards, out of a total of 61 milliards. The yield of the additional 15 lire was 5.7 milliards. Fresh subscriptions raised an additional milliard.

11. Large recourse, on a scale unprecedented in peace time, was had to the Floating Debt in its various forms. Since 1935–36, issues were made of 1-year Treasury bills, bearing 5 per cent. interest payable in advance, to an amount, to date, of between 12 and 15 milliards of lire. A large market has been found for these securities, which, being issued " on tap " throughout the year, have also been taken up by the " Departments ", including the very powerful Cassa Depositi e Prestiti. An issue of 2.5 milliards of 5 per cent. 9-year bonds was authorised, and distributed in payment of the foreign assets handed over to the Treasury since 1935. Their equivalent foreign assets are being gradually disposed of. Their sale value was given as 646 millions for the year 1936–37. Other items of the Floating Debt included the ordinary account (corresponding to the Ways and Means Advances of the Bank of England) with the Bank of Italy, up to a legal maximum of 3 milliards, the silver and Treasury notes circulation (these two items to a rough total of some 4.5 milliards), and advances from the Cassa Depositi e Prestiti, and from a number of institutions, insurance funds, and banks.

12. In conclusion, the additional 56.3 milliards which have been spent in the last few years, raised by borrowing operations, were apportioned as follows ;—

31 per cent. to the Funded Debt and medium-term borrowing;
55 per cent. to the Floating Debt;
14 per cent., raised by the reconversion (including a balance borrowed in the previous years), which did not increase the amount of the public debt.

Thus, the increase in outstanding debt from the year 1931–32 to the year 1937–38 was 49 milliards. On the 1st July, 1931, the public debt of the country stood at 93.7 milliards, of which 86.2 was Funded and 7.5 Floating Debt.

APPENDIX II.[1]

(*a*) GOLD AND FOREIGN EXCHANGE RESERVE AND SIGHT LIABILITIES OF THE BANK OF ITALY

(milliards of lire)

End of Year	Gold	Foreign Exchange	Total	Note Circulation	Other Sight Liabilities	Total Liabilities	Ratio
1930	5·29	4·32	9·64	15·6	2·4	18·1	53·2
1931	5·62	2·17	7·79	14·2	2·0	16·5	47·6
1932	5·83	1·30	7·14	13·6	1·6	15·2	46·7
1933	7·09	3	7·39	13·3	1·5	14·8	49·9
1934	5·81	7	5·88	13·1	1·1	14·2	41·2
1935	3·02	36	3·39	16·3	1·0	17·3	19·5
1936[1]	2·33	3	2·37	16·5	1·4	17·9	22·4
1937[2]	3·99	3	4·02	17·4	1·5	18·9	21·1
1938	3·67	15	3·82	18·9	1·7	20·6	18·5
1939[3]	—	—	—	17·9	1·6	19·6	19·5

[1] In 1927 lire; 1 lira = 0.0791 gr. fine gold.
[2] In 1936 lire; 1 lira = 0.0467 gr. fine gold.
[3] On March 31st, 1939.

(*b*) OPERATIONS OF THE BANK OF ITALY.

(milliards of lire)

End of Year	Portfolio	Advances on Securities	Clearing Advances	I.R.I.	Total	Government Securities	Advances to the Treasury
1930	3·94	1·66	0·20	0·62	6·43	1·16	—
1931	4·59	1·06	0·16	1·54	7·36	1·37	—
1932	5·25	1·29	0·14	1·88	8·56	1·36	—
1933	3·68	1·01	0·10	1·13	5·93	1·37	—
1934	4·00	2·45	0·15	1·09	7·70	1·38	—
1935	4·89	4·09	0·11	0·80	9·90	1·39	—
1936	1·26	1·59	0·02	4·70	7·59	1·53	3·0
1937	2·54	4·50	0·04	4·70	11·80	0·77	1·0
1938	3·70	3·68	0·07	4·70	12·77	0·79	3·0

---

[1] Sources: *Monthly Bulletin* of the *Istituto Centrale di Statistica; Annual Reports for 1937 and 1938* of the Governor of the Bank of Italy; Bank of Italy; *L'Economia Italiana nel Sessennio 1931–36.*

(*c*) OPERATIONS OF COMMERCIAL BANKS.

(milliards of lire)

End of Year	Portfolio	Securities	Advances	Deposits	Cheques
1930	24·6	13·4	16·3	38·7	1·0
1931	23·4	13·1	13·7	37·8	0·9
1932	23·2	14·6	13·7	37·5	0·8
1933	21·4	16·1	14·7	38·8	0·9
1934	20·3	17·1	13·7	38·7	0·9
1935	18·0	16·4	12·9	38·0	1·0
1936	18·5	17·2	13·9	39·6	1·4
1937	18·3	16·8	16·5	41·1	1·5

(*d*) DEPOSITS IN SAVING BANKS, POST OFFICE SAVING BANKS AND SAVING CERTIFICATES AND TOTAL (INCLUDING DEPOSITS IN COMMERCIAL BANKS)

(milliards of lire)

End of Year	In Saving Banks	In P.O. Saving Department	Total
1930	17·37	13·03	—
1932	18·74	17·01	—
1934	19·57	20·42	—
1935	18·59	19·95	67·28
1936	18·74	22·31	75·86
1937	19·00	25·52	80·64
1938	17·80	28·02	86·19

(*e*) OPERATIONS OF INDUSTRIAL CREDIT INSTITUTIONS.

(milliards of lire)

(i) CONSORZIO SOVVENZIONI SU VALORI INDUSTRIALI.

1936	1·42 Securities	0·93 Discounts	0·40 Notes.
1937	1.62 „	0·55 „	0·36 „
1938	1·72 „	0·70 „	0·31 „

(ii) I.M.I.

1936	0·56 mortgages.	0·50 9-year bonds.
1937	0·70 „	0·55 „ „ „
1938	1·04 „	0·88 „ „ „

(iii) I.R.I.[1]

I.R.I.	1·0[2] bonds.
I.R.I.-Mare ..	0·9[2] „
I.R.I. Ferro ..	0·9[2] „
I.R.I. Stet ..	0·4[2] „
Debt with the Bank of Italy	4·7

[1] See, too, note 2, p. 273.

[2] Amount issued.

	(iv) CONSORZIO DI CREDITO PER LE OPERE PUBBLICHE	(v) ISTITUTO DI CREDITO PER LE OPERE DI PUBBLICA UTILITÀ	(vi) ISTITUTO DI CREDITO NAVALE
1932	4·14	4·08	0·36
1934	6·83	6·68	0·49
1936	6·43	6·32	0·40

(*f*) AGRICULTURAL CREDITS.

(milliards of lire)

End of Year	Short Term	Long Term	Total
1930	0·74	0·75	1·49
1932	0·85	0·99	1·85
1934	0·90	1·30	2·20
1935	1·21	1·25	2·47
1936	1·70	1·32	3·03
1937	2·38	1·45	3·83
1938	3·52	1·49	5·01

Ethics and Economic Reform

By Frank H. Knight

II. IDEALISM AND MARXISM

In this paper we shall consider, in their relation to the problem of economic reform, two of the three general ethical methods or approaches which seem to be most important in Western civilisation as bases for the criticism of liberalism, and possible successors to it as the ethical basis of a social order. The three viewpoints referred to are Idealism, Marxism and Christianity.[1] For a discussion within the scope of an article, the respective viewpoints or conceptions must naturally be taken in a rather general interpretation, without any attempt at precise definition or references to the literature, or an adequate polemical defence of the view presented as to what constitutes the essential and distinctive principle of each. They will be considered more or less comparatively, in relation to liberalism, which, as the accepted moral basis of social order hitherto in our culture, seems to be entitled to the advantage of the *onus probandi*.

A. Idealism

In the academic and speculative ethical tradition of the modern world, the most important view of ethical problems and principles alternative to liberalism (utilitarianism, economism—and, we may add, pragmatism) in terms of which the latter has been criticised, is what may be referred to as rationalistic or idealistic ethics. It is represented philosophically by the Hegelian and neo-Hegelian school or tradition. The contrast between liberalism and idealism may be provisionally indicated by the terms, " individualism " and " groupism ". The task of the discussion is to show what these concepts really mean for the purposes of our problem. It will be recalled as the main thesis of the previous article that the crux of utilitarian liberalism did not lie in the theory of hedonism, or any theory of the content of the good, but simply in the doctrine of individual autonomy, with mutual consent—assumed to be in general a criterion of mutual advantage—as the ethical ideal in all dealings or relations between individuals.[1] The central tenet of idealism, in contrast, is that " society " is the real repository or locus of value, and the real choosing subject or moral agent. The idealist considers the individual as existing " for " society, much as an organ or cell exists for the organism, instead of the converse, or instead of viewing society as having no reality except as an association of individuals for mutual individual advantage. Of course both of these positions are untenable in any extreme version. Any simple either-or dichotomy of viewpoints in social philosophy is necessarily wrong. In this case it is especially clear that there is validity in both positions and that both are partial truths in various meanings, along with many other conceptions of society. (Among these other conceptions that of a part of the members of society exploiting or using others must not be left out of account.)

---

[1] The ethical position of liberalism was discussed in an earlier part, Economica, February, 1939. Because of the excessive length, the topic of Christianity has had to be reserved for treatment in a separate paper.

From the standpoint of a critical survey of principles advocated for the guidance of social action or policy, the elementary difficulty of definition or clear formulation arises out of the relation between theories of what is, and theories of what ought to be—assuming that the word theory can properly be used in this second connection. As regards idealism in particular, the first point for emphasis is that in the statements of the position by its advocates it is primarily a metaphysical theory of the nature of society and derives most of its appeal as a programme from its merit in this regard. Its implications, or the ostensible deductions from it, for the guidance of action, are much less cogent, either logically or ethically. That is, the social policies advocated are open to question, both as to their actual relation to the premises from which they are ostensibly deduced, and as to whether they are valid on any grounds, either as axioms or as deductions from any axioms which are acceptable as such.

---

[1] The main difficulty in this whole field of discussion is the vagueness in the meaning of terms, which is partly due to the efforts of the advocates of every position to treat some compact verbal designation of it as a slogan and to interpret it in a question-begging way to include as much as possible of all that is accepted as good by ethical common sense (especially that of the particular culture to which the discussion is addressed). This is particularly true in connection with the pleasure principle, which can be used to interpret and to defend practically any ethical position. It is a familiar fact that its advocates have never found it inconsistent with ascetic ideals and practices, and indeed have not found suicide a serious intellectual difficulty for their doctrine. To the present writer, it seems to be an essentially meaningless idea, a dogmatic psychological verbalism. If the term " pleasure " is used by definition as a general designation of all motive, the hedonistic principle is true by definition. And if this is not done, if it is admitted to be possible for men to desire anything else than pleasure, then the principle is axiomatically false, or incomplete. It is possible to argue that what men desire is always a mental state, and to call " desired mental state " by the name of " pleasure ". But it is as certain to common sense as anything can be that men rarely if at all think they are desiring pleasure, until they are asked (by themselves or someone else) to give a " reason why " they desire something which they do immediately desire. And when this issue is raised, the form which the answer takes seems to be chiefly a matter of the cultural traditions or education, including self-education, and habits of verbal usage, of the individual in question.

The philosophical problem as to the nature of the empirical social and political reality is properly in question here only or in so far as such truths or postulates can be validly used as premises for the inference of principles of a distinctly ethical sort. On this point, it seems necessary to take a negative position, with one important qualification. Moral ideals, in the strict sense, must be either axioms of moral commonsense, or deductions from such axioms. This problem is almost purely one of " critical " thinking, and relative to norms rather than facts. Its relation to any question of fact in the meaning of sense observation is very indirect. The qualification is that there is not really much meaning to moral-political speculation in a vacuum, i.e., without reference to what is possible and practicable in the real world. (The human significance of descriptive essays on " Heaven " is a question about which the writer has puzzled a good deal, without reaching any very satisfactory conclusions !) From this practical point of view, it is certainly necessary to keep clearly in mind that the question is one of changing an existing situation, beginning with that situation as it is " here and now ", and using means and procedures which are actually available as elements in that situation.[1]

---

[1] The negative proposition that statements about facts do not contribute to the solution of the problem of the end or ideal, really contains but half the truth about the philosophical difficulties of the relation between facts and values. There is a sharp contradiction between the world-views involved in approaching human data from the standpoints respectively of the intellectual or explanatory interest and of the practical interest, the interest in action. (This is true whether the interest in action is taken in the form of personal desire or objective value judgment.) The conception in modern thought of a " theory " of any subject matter is descriptive or positivistic. Positive science excludes any notion of " real cause," which is to say any notion of activity or initiative on the part of the subject matter treated as cause. But in human phenomena, a subject is always in some sense and some degree being acted upon by itself. And for social phenomena we have also to recognise group self-action in the degree to which the society is " democratic," in contrast with a dictatorship, taken in the " absolute " sense that a single individual would own all the rest of society and treat his subjects as things. Thus the difficulty becomes two-fold ; for even individual freedom is to the scientific intelligence

In spite of their divergent metaphysical premises, both utilitarianism and idealism have a common general conception of social action, which is the real essence of each position from the point of view here in question, the discussion of policy.[1] In terms of a first approach, the difference seems to be, in short, purely metaphysical. Both systems conceive of society or the state in terms of law, and of law as the expression of a "general will." The difference has to do with the relation between the individual will and the general or social will. Idealism defines its concepts in such a way that the two are always identical, while utilitarianism, in the "moderate" version of liberalism, recognises both harmony and conflict.[2] The essence of Liberalism was, or is, the conception of a legal state with law or legality as a moral-religious concept—in spite of the pose of hard-boiled individualism—and with absolute and "sacred" equality of all individuals before the law. This equality, moreover, holds both in the passive sense of the treatment of individuals by the law, and in the active sense of their equal participation in "making" the laws (equality of voice or vote). Government officials in particular are supposed to have no "power" (and hardly any existence) as individuals, but to act exclusively as agents of the law, both when they enforce law and when they make (i.e., change) laws. This includes a theoretically equal voice in the selection of officials, and equal opportunity to be elected to office (both under the law) through the suffrage of all. Thus ideally all political decisions in a liberal state represent the best possible compromise between the (more or less conflicting)

"transcendental," mystical and unintelligible or simply illusory, but group freedom or self-determination is far worse in this respect.

In addition, liberal social thought has tried to straddle the world views of positivism and of individualistic voluntarism, utilitarianism, economism or pragmatism. These are inherently contradictory even between themselves, while both reduce to nonsense any conception of intelligent group decision in belief or action, because they make discussion, or meaningful utterance unreal. And Hegelian idealism reaches by a different route essentially the same impasse for thought, as far as human interests and activities are concerned. Its preservation of some kind of freedom or initiative for the "Absolute" (if it does preserve any) is of interest only to the speculative philosopher. (In fact, as far as this writer can see, the role of speculative thought itself, as a real activity, as "problem-solving," is just as effectively excluded by the notion of the Absolute as it is by that of universal mechanism.)

[1] This refers to one interpretation of utilitarianism, i.e., the ethical interpretation, which is just as contradictory to the psychological interpretation as it is to positivism, mechanistic or culture-historical. The psychological interpretation, whether in the form of hedonism or any purely individualistic conception of motive or interest, lands one in solipsism.

[2] In the more extreme versions of utilitarianism, such as that of Hobbes, the notion of primitive antagonism, as a feature of "human nature," is carried so far that there is not much left of the unity, or the social nature of man, *à la* Aristotle, or *à la* Hegel. Yet even Hobbes's notion of the primitive contract with a "dictator" (dynasty) for the purely negative purpose of preventing the "war of all against all" may be said to preserve some vestige of it.

interests of individuals—a composite, or centre of gravity, or "equilibrium of forces", force being the form under which interests are conceived as operating.[1]

Differences between this ideal result and the way things work out in practice need not be considered in detail here. The "worst" features of the reality are no doubt two: First, the general conception tends to get to be that the majority has the "right" to rule the minority, which is an utterly different matter than the conception of the general will with voting as the best method of ascertaining or expressing it. (Also the vote which decides a concrete issue need not in fact be a majority, or even a very large fraction of the total, and need not be cast with much reference to that issue.) Secondly, and perhaps worse still, the machinery operates through campaigning and partisan organisation designed to influence the electorate, and in the nature of the case campaigners use any procedure or device which "works," which brings victory to the user. Public political discussion under actual conditions very frequently works in the opposite direction from that of forming a real intelligent general will or concensus, giving rise to hostility, bad blood, and partisanship for the sake of partisanship.

Mere competitive persuasion of the masses is not generally, if it is under any conditions, a good test of truth or of the real merits of a question. The saving grace of liberalism lay in the assumed moral and constitutional commitment to minimising the functions of government and the sphere of its activity, i.e., to "freedom" as the fundamental ideal, and the use of coercion negatively for the most part, to prevent coercion by individuals and private groups. This means using it to enforce the ideal of mutual free consent as the basis of social relations, plus only such regulatory measures and "public works" as are not seriously questioned. Apart from this ideal, as an accepted constitutional principle, the notion of majority rule would probably never have been seriously defended by competent thinkers as essentially better than other forms of tyranny.

Turning to consider idealism as a contrasting political conception, with "society" as the unit instead of the "individual", we confront in the first place the rather mechanical but vital question of the definition of "society" in the concrete sense of physical boundaries. To this question there are two main possible answers. The first is to accept as 'given', once for all, the existing political map of the world—divisions and subdivisions!—as it stands, at the moment when the question happens to be raised.[1] Now it is a glaring matter of fact, however unpleasant, that the political organisation of the world, or lack of it, at any date in history is a product of the historical processes of the past, which present a mixture of "brute force and accident", lying and trickery—the "horrid tale of murder and spoil, etc.," of the poet. The result is satisfactory to no one who views it with any impartiality. As an ideal it would be accepted only by the furious partisan of some glutted imperialism which could not hope to get more and would be certain to lose rather than gain by any change.

---

[1] The relation between interests in a purely individual, egoistic or selfish interpretation, and "opinions" as to what is "right" in some objective sense is a question to be mentioned here as of the heart of the problem, but one which cannot be discussed at the moment.

The question of a possible redefinition of political units, a redrawing of the political map of the world, is usually discussed in terms of the unity and diversity of "culture", which is the second conceivably possible solution of the problem of definition of "society". But this solution is in practice hopelessly ambiguous, whether referred to populations themselves and their will to unity or separateness, or to "experts." In much of Europe, in particular, it would be physically impossible to draw the political map in such terms, by any interpretation. The European (and African-Islamic-Asiatic) settlement of 1919, after the first World War, with the aftermath, renders superfluous any detailed discussion of this topic. Besides the vagueness of the principle, in relation to the facts, we must also recognise that cultural unity and divergence are also, and nearly to the same extent as legal boundaries, the product of the same largely non-moral or immoral historical forces.

The position as to "real" or ideal boundaries of societies which is, quite naturally, taken in practice, for the most part, is one which mixes or combines the two possible solutions in such a way as largely to get the worst consequences of both. Most of the interpreters are partisans of some existing state, and draw the boundaries of that unit to include everything actually included at the moment and as much more as any plausible historical reason or justification can be found for doing. There are hardly any limits to the extension of most of the greater states on this principle, if one goes far enough back in history (and not too far). But in fact the process does not stop even here. The notion of " natural superiority ", racial or cultural, is called in to support a " right " to include any strongly desired slice of the territory and population of the globe " inferior " in culture, either on the basis of incorporation or of permanent retention in a more or less servile status. (Nor is this a mere manifestation of wickedness; the problem of backward peoples is real.)

---

[1] We take for granted the definition of political units primarily in terms of territory, and omit any discussion of the exceptions, which are by no means unimportant. The difference between the treatment, by states, of citizens by birth and of resident aliens and of travellers, and the claims of states over citizens abroad, and their descendants, and everything having to do with freedom of movement of men between states,—all these things are rapidly growing in importance under our eyes.

Thus the physical question of the boundaries and the inclusiveness of the state merges into the ethical question of the nature of the social end which is set over against the individual ends (individually judged) of liberalism. It is natural to assume that the end of political policy is itself political; and this runs naturally if not inevitably into the conception of the end as aggrandisement of the political and/or cultural unit as such. And again, political aggrandisement inevitably takes chiefly the concrete form of military power. A glance at modern history is enough to show that in particular the economic policy of states has aimed at military strength practically to the extent that it has been " socialised ", i.e., has departed from the liberal ideal of allowing each individual to pursue his own well-being in his own way, subject only to the principle of mutual consent, enforced by law.[1]

The considerations just noticed have to do with the meaning of society in relation to other societies, or concretely with " international " affairs. With reference to the internal problems of any group, the fundamental issues may again be raised by the question " who is the state ? " but with a different interpretation. The crucial fact is that when a society has occasion to " speak " at all—to declare itself on any matter, internal or external—it necessarily speaks through some individual human being, or at most some very small group; and when a society acts, either on any of its own members or externally, it acts similarly through human agents. The tendency in philosophical formulations of the idealistic theory is to ignore the social-problem side of this whole matter, to explain what happens by assuming that a social group acts as a whole and spontaneously, either directly in dealing with concrete situations affecting group life, or at least in designating agents to act for it. That is, the theory tends to abstract altogether from power relations within a social group and the problems which these involve. (Or if there is a contest, one side is naïvely taken as representing the society, the other as subversive.)

---

[1] The essential ethical and historical-psychological problem or problems brought to mind is (or are) why men wish to preserve and to propagate their culture and political institutions, and what is the human right and wrong of culture differences and their preservation, propagation or extinction, by various processes in both cases. It is not clear what are the actual desires back of the urge to cultural expansion beyond " material self interest " on the part of individuals and groups whose power-status will be improved; and that, while important, is certainly not the main factor. The facts of culture rivalry are especially puzzling, because the basis or nucleus of it all is so largely language, and linguistically educated people do not think of one language as being substantially superior to another in a utilitarian or æsthetic sense, to say nothing of moral value. Latin-American nationalism is especially puzzling. But such topics would lead far afield.

Now this view is in accord with fact in some divisions or aspects of social life, such as language, and social usages, in so far as these do take care of themselves "automatically," without giving rise to any recognised problem. In a small primitive group, the activities of various kinds, economic, religious and "social" in the narrow sense, may be reduced to a routine or ritualised to such a degree that this view is valid over most of the field of activity. It may even hold for the enforcement of the criminal law—if the concept of law is taken to apply under such conditions; that is, the "law" may either be enforced by "mob" action (as we should call it) or by functionaries selected by ritual and proceeding in strict accord with ritual. It is conceivable, at least, that in nearly any connection the general will may be a plain matter of fact and may present no "problem" of discovery, interpretation or execution.[1]

The idealistic theory of society as an "organic" unity, or "whole", applies very well, in short, as long as there are no problems. A social problem arises out of difference of opinion, and/or clash of wills, within the membership of a group. A clash of wills, it should be observed, does not of itself give rise to a social problem; it does so only if there is a difference of opinion connected with it in some way—at least as to what "society" is to do about it. It is in connection with problem situations that the difference between liberalism and idealism comes to light. Such situations have arisen especially in connection with war, which resists ritualisation, and with demands for *change* in the law. In the face of a real problem, idealism tends to advocate the "traditional" solution in so far as one can be found; first, in the literal sense of following tradition on the concrete issue; and second, when tradition gives no direct answer, it tends to emphasise the traditional distribution of authority in the group. Thus the whole bias and tendency of idealism is *conservative*, in both the natural meanings of the term, adherence to any established practice, and leaving all matters of social action or change to the decision of the parties actually established in positions of authority. And under conditions where the need for action is recognised, the latter tendency predominates, meaning that an extreme concentration of power in the hands of irresponsible persons as functionaries is favoured; or, in everyday terms, it means aristocracy and monarchy.[1]

---

[1] The close connection between the idealistic social philosophy and the historical jurisprudence and *Kultur-Historismus* in general is well known; also its relation to the Romantic Movement, with the latter's idealisation of mediæval conditions. The sociology of the "social organism" should also be mentioned, especially because it was promoted, in a very different sense, by the individualists (and positivists) Spencer and Comte.

This view finds cogent argumentative support in the theory of division of labour. One thinks at once of the fable of the quarrel between the bodily members, hand, stomach and brain. The doctrine of evolution has contributed to strengthen its appeal, especially as to the progressive centralisation of control functions in the organism in the brain ("cephalisation"). Philosophically, or analytically, speaking, the issue between aristocracy and democracy (idealism and liberalism) is largely a question of the relations between knowledge and will, or of their relative importance. The social interest is naturally thought of as pertaining to the population as a whole. But knowledge, both of the precise nature and content of that interest, and even more, of the technical means or procedures adapted to promote it, is naturally treated as a speciality of selected individuals or circles. In practical affairs, the question of the relation between individual interest and group interest tends to drop out or become "academic," the issue being joined on the *method* of determining the best interest of the group and its members, which both parties virtually (and ultimately no doubt quite properly) assume to be harmonious. There is no possible issue on the fact that a group of any size must act through agents, officials, including under modern conditions the activity of law-making (i.e., law changing). Thus the concrete issue becomes that of the " responsibility," or irresponsibility, of officials, and of concrete means for getting officials really to act for the interests of society rather than in their own interests, as individuals or as a "class." On this point, there is much to be said on both sides, but this essay is not the place to say it, except for one point.

---

[1] An undemocratic, traditional, and authoritarian organisation of religion naturally goes along with a similar conception of the state, the two being supposed to work together, but with one or the other predominating, depending on the "school" of idealism which is speaking.

Our concern is with ethics, and specifically with remedies for the basic ethical defect of liberalism or individualism. This defect, it will be recalled, has to do with the preservation and improvement of culture in those aspects which are not adequately taken care of by individual self-interest or the interest of the private family, or other private or voluntary associations. It is a question of fact and of factual analysis to determine what these are, since it is presumably admitted that there are moral and social interests of many sorts which will in practice be *better* promoted by " society as a whole," which means the state, or specifically the government, than they will be if left to voluntary action on the part of individuals and spontaneous free groups.

At bottom the problem is obviously two-fold—assuming that we do not accept a rigid ruling-caste system in which the rulers either use the mass of the people for their own ends or treat them as little children. First, there must be provision for adequate *discussion* of questions of social policy from the standpoint of the ultimate long-run or of fundamental values as distinct from individual interests, leading to the formation of a recognised general-will. Second, provision must be made that the results of such discussion shall be carried into effect, as fast as genuine results are reached. As regards the first issue, there is relatively little difference of opinion that leadership in discussion needs to be the work of specialists, of men of " leisure " in the sense of freedom from routine economic cares and ability to devote their entire energies to the " intellectual life ". (The relation between this and " education ", in the narrow sense, is a question.) In practice the question has to do with the selection of the individuals to perform the function of intellectual leadership, specifically whether they should be a hereditary class or caste, or a profession recruited from the whole population; and if the latter what is to be the method of selection, and the method of their training and remuneration or support.

The final question of application or execution, perhaps most crucial of all, is whether the class or group of intellectual specialists should have *power* to effectuate their decisions, or should have to act by persuading either political officials entirely distinct from themselves, or the masses. These questions cannot be discussed here. We may remark that the " commercialisation of culture " is one of the most sinister phases of liberalism as it actually works. On the other hand, the idealistic alternative to liberalism, while, viewed in the abstract, it does seem to offer some solution for the weaknesses of the latter in the way of a more adequate consideration of those interests of the distant future which seem to form the content of the concept of group interest, yet presents equally fatal weaknesses in practice. In particular, as already pointed out, idealism means in practice, first, the deification of the state and the interpretation of the interests of the state in terms of political aggrandisement through military power rather than in terms of cultural values; and secondly, it means either traditionalism or authoritarianism in the constitution of the state.

* * * * *

A few words are called for in relation to the current historical development in the direction of social stratification and dictatorial leadership, or " corporativism ". Superficially, this presents important differences as compared with a traditional-authoritarian system such as obtained in the later Middle Ages, the period of feudal monarchy. One detail, which will not be gone into here, is the tendency of the political state to absorb or even to replace " the church "; in reality, this is only a continuation of a tendency which has been going on in the national states throughout their history, and which, one must say, is a logical development, probably an inevitable one if national states were to survive and not give place to a world political order corresponding to the teachings of the accepted world religion. As to the corporative dictatorship itself, the essential fact may be stated in three words: it is new. This means, in the nature of the case, that it is not traditional. But it does not mean that, from the moment it becomes securely established and accepted, it will take the location of ultimate political power any less as " given " or a given basis for its further extension, than would be true in the oldest and most stable system under any ideology. It is also obvious that prior to the establishment of any dictatorial regime, in so far as it appeals for popular support, its promoters are in essentially the same position as the candidates for office under any democratic regime. (In so far as a political coterie is struggling to get or keep power through conspiracy and force, this of course does not so fully apply.) The special feature of the position of a group publicly campaigning for dictatorial powers is that they virtually announce in advance, to all who are intelligent enough to understand the simplest political situation, that once in power they will do as they please, as far as they " can ", that the people are being asked to write a political " blank check " valid for all future time.

It is also in the nature of the case that any new power organisation, while it is organising and stabilising itself, will present much of the appearance of co-option, on a " merit " basis. In this respect, the most important question regarding the new dictatorships—" communism " in Russia as well as " fascism " or national socialism, or whatever name any ideological dictatorship may have given itself—cannot be answered for a generation or two, at least. That is, we cannot tell to what extent, or in what form, such a system will settle down into a " class " structure in the only proper sense of the word, a stratification in which position is determined primarily by birth. On general grounds, such a stabilisation is what one would expect to happen—as feudal relations and guild privileges tended to become hereditary in the Middle Ages.

B. Marxism

During the better part of a century—since the publication of the Communist Manifesto in 1848—economic reformism in the European world has been coming more and more to mean the philosophy and movement known as Marxism, ostensibly a development from the Hegelian form of philosophical idealism. As hardly needs to be said, it is impossible to discuss it briefly without seeming both superficial and dogmatic. This impression will undoubtedly be aggravated by the content of what the present writer has to say. For the movement presents an especially aggravated case of a large part of the world being " out of step with me ". Especially interesting is its relation to Christianity. For where the latter seems to involve romantic oversimplification of a sentimental or moralistic sort, Marxism seems romantically immoralistic, destructive, diabolical. Sombart has somewhere remarked that Marx was a man of two souls, a thinker and a hater; I should say that as a hater he was undoubtedly entitled to a very high rank. If the gospel of love will not solve our problems we must admit the fact and turn from it in sorrow, but we can both confidently and joyfully reject the gospel of hate.[1] Marxism is not merely a romantic over-simplification; it is intellectually self-contradictory and ethically nihilistic and monstrous.

To intellectual analysis Marxism presents two main elements or aspects, a philosophy of history and a social propaganda; and the two meet and fuse in the highly ambiguous doctrine of the class war.[2] It is hardly possible to take the class war seriously as a theory of history, or even to form a judgment as to how seriously it was "really" taken by Marx and Engels, or is taken by their followers. The essential meaning of the notion is obviously its pragmatic significance. The class war idea was put forward as a theoretical view of what happens; but the aim, conscious or unconscious, obviously was to use the theory to make it happen, to foment a class war—which of course had not previously existed, at least in the desired form and degree, or there would have been no occasion for the propaganda. What is ominously as well as profoundly significant is that human nature and human mentality are such that a theory of what does and must happen—and especially such a theory of "inevitable victory", annihilating all opposition—will tend to make people act in accord with it, and so to bring the facts into accord with it. But this is largely the case. The doctrine that social life has been and is a war between classes has proved so effective in promoting a class war that it begins to seem doubtful whether there is an effective preventive, i.e., any effective mode of resistance except war, in which other classes will take up the challenge of the " proletariat " and its sympathisers and fight the thing through to a finish. This is what current history seems to show; where the Marxists have shown serious strength but without being able to carry through their programme for seizure of power, Marxism is being suppressed and all the liberties of the masses along with it.

---

[1] There is a natural causal connection between these two positions in spite of the superficial antithesis. Love for the downtrodden plus superficiality in diagnosis takes the form of hatred of the privileged, and belief that their wickedness is the cause of poverty and their destruction its cure. There are many Christian Marxists.

[2] This sketch will not go into questions of critical interpretation. Marxism, which is like a religion in many respects, is so also in this that the problem of what it means is a question of orthodoxy, the "party line". We shall discuss the materialistic or economic interpretation of history and the class struggle as a version of that doctrine, and as an ethical position. If Marxism does not mean that, there is nothing that it can be said to mean. For a survey, the reader may consult: M. M. Bober, *Karl Marx's Interpretation of History* (Harvard University Press, 1927); Sidney Hook, *Towards the Understanding of Karl Marx* (John Day, 1933); Henri Sée, *The Economic Interpretation of History* (Adelphi Co., 1929); E. R. A. Seligman, *The Economic Interpretation of History* (Columbia University Press, 1902, 1924); on Christianity and Marxism, John Lewis (ed.) *Christianity and the Social Revolution* (Gollancz, London, 1935, 1937).

At the time when the propaganda became active, in the later nineteenth century, the social situation clearly was not one of class war. But the propagandists hoped to develop a political movement of that form, by which they would in the first place, of course, ride to power; afterwards, they would (presumably) use their power to effect certain political objectives and social changes which they considered desirable. The nature of the ultimate programme will be briefly noticed later. The interrelations and relative importance in the minds of the promoters of Marxism, as of any movement, of these two motives—getting power, and using power to achieve particular results—it is useless to attempt to unravel.[1]

* * * * *

Underlying the historical theory of the class war, the intellectual basis or content of Marxism is in the first place " dialectical materialism ". This is a supposedly materialistic interpretation of social process, arrived at by inverting the Hegelian idealistic or dialectical world-view. There would be no point to any extended examination into the meaning of " materialism ". As every student knows, it dissolves under critical examination into phenomenalism, sensationalism, conceptualism, or field theory, or some sort of non-physical conception of the ultimate nature of matter itself. The essential fact is that Marx and Engels never gave the matter any competent or serious critical examination. What they seem to have meant by it can be best expressed by some such designation as naïve empiricism, positivism or sensationalistic phenomenalism, really involving an injunction against any effort at definition of content that would go beyond the common sense of the man in the street. The crucial matter for practical purposes, in line with the general standpoint of these articles, is that the position reduces all discussion to nonsense, all utterance to noise or physical configuration of some sort. The statements of the propagandist himself, like other utterance, are also social and historical phenomena. And to assert that they are merely the physical effects of physical causes amounts to saying that one is not saying anything, a self-contradiction which seems to surpass any other conceivable example of the species self-contradiction in self-contradictoriness.[1]

---

[1] But it would be impossible to overemphasise the fact that such an analysis of the relations between individual motive and social purpose, and between both and action, individual or social, would be necessary as a foundation for any significant or genuine social philosophy. In these essays, there is no effort to go very far beyond demonstrating the necessity of such a philosophical viewpoint, through exposure of the self-stultification involved in any theory either of positive causality or of purely individualistic voluntarism—which two positions, though contradictory between themselves, have both been assumed in the social-philosophical literature of modern liberalism.

The connection in which the psychology of motivation most requires careful consideration, but is most neglected, is the motivation of social reformers themselves. Much light could undoubtedly be thrown on this psychology by an investigation of the mentality of inventors of perpetual motion machines. They usually " know " that they can produce the general result striven for, but are not committed to any particular method to a degree that causes any inclination to give up their project when it fails experimentally.

In the second place, the Marxian historical philosophy is called "economic". This concept is so ambiguous as to involve confusion of most of the irreconcilable conceptions of the nature of social reality which the human mind has recognised or invented. On one hand, it may refer to a doctrine or thesis that all individual behaviour is economically motivated, meaning fully accounted for in terms of use of means, or effort to use means, with maximum efficiency, in realising given ends. But even this statement is ambiguous, since the assertion that men do act in such a way as to maximise something and the assertion that they attempt to do that, and nothing else, themselves belong in two incompatible philosophical systems. All treatment of motives on the analogy of mechanical forces, tending to establish equilibrium (or perpetual oscillations) involves abstracting from the factor of possible error, and consequently from that of effort, in human conduct and the elimination of any problem-solving character and denial of the reality of problems. If behaviour is really economic it cannot be " perfectly " economic. It is in fact and undeniably problem-solving, which is to say that it involves effort and the liability to error. Any other conception, excluding effort and error, destroys its economic character and is clearly untenable.

---

[1] In spite of the absurdity involved in using any form of historical determinism as the basis of a propaganda for action, it is obvious to the most superficial student of history and politics that the device has proved effective in many hands and in many connections. Confident insistence that a course of events is inevitable is typically an excellent procedure for securing wide and active support in bringing it about. The election theory of salvation in Calvinistic theology is a conspicuous case in point and is especially interesting as an interpretation of Christianity widely accepted by the best people and the greatest minds of the "Christian" world. And they have been perhaps the most effective as well as the most active Christianisers, from the apostle Paul to Calvin and Knox. Moslem and other Oriental fatalism, with its effect upon soldiers, is another case in point.

In interpreting all these facts, the objective student must keep in mind the ambiguity of his own role, or at least face the question whether he really means to be purely objective, or thinks also of influencing social change by his own activity as a student. If he wishes merely to achieve intellectual clarity—presumably for other members of some intellectual community as well as for himself, since otherwise he would not publish his analysis or give any utterance to it—he must make conscious and careful provision against exerting such influence, by keeping his work a secret outside the circle of "intellectuals" for which it is intended. Publication in any society of any discussion of that society and its activities must be expected to have some effect on the future course of events.

The third meaning which the concept of the economic has, or is assumed in Marxism to have, is a form of historical causality, or historical law, or cultural positivism. This is a conception of cause and effect in cultural phenomena as such, without reduction to physical terms on the one hand, or to psychological terms on the other—i.e., without ascribing human conduct to motivation of any sort. This third meaning forms the natural and best interpretation of historical dialectic. It is the sort of methodological assumption ordinarily made in the study of linguistic change, and of which linguistics furnishes the best example. Languages are supposed to change in accord with their own laws of change and the changes are explained when the laws are discovered and stated. And the same interpretation can be applied to law, and other social phenomena. Marxism applies it first to " economic " process—somehow defined, or left undefined ; it then explains other phases of the historical process by treating the " economic " element or factor as an independent variable or cause, which proceeds thus in accord with its special laws and controls all other elements in the historical process as dependent variables or effects. As to the meaning or content of the economic element itself, it would seem that the best interpretation of the Marxian conception is to take it as meaning technology, in an inclusive sense, and to view the whole position as a technological interpretation of history. This view cannot be derived conclusively from the writings of Marx and Engels, which do not indicate any one view unambiguously. But it seems to be more defensible than any other interpretation. A technological interpretation, again, amounts to looking at history in "Darwinian" terms, and accepting a theory of biological determinism. At the human level, biological efficiency as a variable may be considered to be a matter of technology, and historical change viewed as the "survival of the fittest" in a competition between groups on the basis of technical efficiency, taking account both of growth in numbers and of military superiority.[1]

Darwinism, in turn, is ordinarily thought of in terms of "natural selection" in a "struggle for existence"; and this struggle may verbally suggest the class struggle, or war, of Marxism, already referred to. But a little reflection will show that if Darwinism is made to support a culture-positivism interpretation of history, in the way just indicated, it cannot at the same time support, or even leave room for, a class-struggle theory. A criticism of the class-struggle concept requires consideration of the two notions, struggle and class. The first question is, how far and in what sense human history is an affair of struggle at all, as opposed to co-operation, or some other form of motivation, or of unmotivated action. Now the concept of struggle is really a new theoretical category of behaviour entirely distinct from all those hitherto mentioned, and in addition is itself a highly ambiguous notion. It clearly cannot be reduced to cultural positivism or "dialectic", although that is the meaning which must be given to it in the connection just considered. If it is a positive category it is not struggle in the meaning of ordinary usage in connection with war or any contest between human beings, whether individuals or groups, for this is or involves purposive behaviour, and at a very high level of complexity.

The notion of biological struggle, either against the environment or as "competition" with other species, is very difficult to interpret. We raise the whole question of the nature of biological phenomena and of evolution in particular. It seems to be impossible to think of the facts entirely apart from some idea of struggle and competition. But it is competitive in a sense in which competition is completely foreign to the behaviour of the economic man, and which yet is essentially teleological, and not reducible to positive process. In any event, the class struggle, if it is to serve the purposes of the Marxian interpretation, must be taken in a sense categorically different from both. This must be a real fight. It is competitive in a far deeper sense than is, for example, a foot race. In the first place, it is like those games in which it is as much a part of the player's objective to impede and thwart the efforts of his opponent as it is to achieve his own positive aim of " scoring ". But there is a third degree of difference from individual economic effort which itself, in so far as it is economic, is not competitive at all in the psychological sense. The Marxian class struggle is not merely a duel *à outrance* but is a duel without rules of any sort. There seems to be no intellectual bridge between such a notion and any form of historical determinism.

---

[1] This interpretation seems to be advocated, for example, by the American Marxist A. W. Calhoun. See his review of M. M. Bober, *Karl Marx's Interpretation of History*, American Economic Review, Vol. 18 (1928), pp. 275–6.

This brings us to the second element in the class struggle notion, that of classes, social or economic. But any effort to define the notion of class and to identify classes, as defined, in any actual historical situation, will make one more than hesitant in treating historical conflict as a class struggle. In history, both individuals and groups in infinite variety of kinds, and changing in character almost from hour to hour, are constantly pitted against each other on an infinite variety of issues. And very largely there is no issue at all except the struggle for power for the love of power or even, in no small degree, for the love of struggle, or of victory.

For one thing, a matter of detail but fatal to the theory, if a class struggle or war is to be realistic, the lines must be drawn between two factions ; even a three-cornered war is hardly thinkable. A final or crucial struggle must be between those who are " for " and those who are " against " something or other, some leader or programme of action. On the political arena, to be sure, there may be manœuvring and jockeying for power among a number of conflicting parties or positions, apart from any issue except that of power itself. But the effort to interpret any important historical struggle, especially in modern history, in terms of classes and class interests seems to reduce the idea to absurdity. Political parties do not correspond to classes, and neither does the line-up on particular issues. And this is a most fortunate and praiseworthy circumstance. For if political divisions did take place on the lines of particular but conflicting economic interests, or of sharply conflicting social philosophies, it is hardly conceivable that free society could continue to exist. In other words, the result would be a real class war, in which some class would win and all others would cease to exist, politically at least, if not physically.

Before leaving the intellectual confusions of Marxism and turning to its ethical aspect, and particularly the ethics of the class struggle theory, we may repeat once more our main point in this whole discussion of the ethics of reform. It seems to be a first and "absolute" requirement for any ethical discussion that it rest on philosophical premises implicit if not explicit, which make discussion possible, meaningful. But all the interpretations of the economic interpretation which have been mentioned have the characteristic in common that they violate this elementary requirement; they all make all social discussion of social policy unreal. Every one of them embodies either some form of positivistic premise or some form of egoistic voluntarism. And if anything whatever is self-evident, it is surely self-evident that the members of a group cannot carry on a discussion of group policy using exclusively propositions beginning either with "in fact" or with "I want". There must be recognition of some "objective value judgment", recognition that questions of policy for the group are problems, and have better and worse solutions. In so far as any discussion on the basis of any of the philosophical positions so far considered is thinkable at all, it is thinkable only in and for an intellectual community completely segregated from the society whose phenomena are the subject of the discussion, and the phenomena must be regarded as presenting problems only in the sense of intellectual problems for the discussion group, not problems of action for the society itself. This hypothesis would raise the philosophical question whether it is possible to believe in the reality of a discussion group without believing that other societies, taken in relation to other phases of activity, have the same fundamental character to some extent, i.e., that in human society in general problems of action are to some extent settled by real discussion.

If discussion itself is mechanically or culturally determined, or if it can be adequately accounted for (causally) in terms of individual interests alone, whether these are thought of as being essentially economic or of whatever kind, then discussion simply ceases to be discussion. The completely candid Marxist would have to begin every statement with the observation that the noise he is about to make is to be regarded as the effect of appropriate causes, or (really also, at the same time) that the proposition he is about to utter is purely an expression of certain (economic) interests of his own ego. Even this is not the whole story. A slightly more persistent and penetrating philosophical critique would show that without both individual problem-solving and real discussion between individuals, it is impossible to believe in facts, in the plain man's sense, to say nothing of the facts and principles of science; utterance itself becomes unreal and illusion an illusion. Ultimately there is no categorical difference in intellectual status or objectivity, in the general sense of validity or verity, between judgments or statements of fact and judgments or statements of value. Truth itself is finally a value, and the will to believe the truth, rather than anything else that one might for any other reason wish to believe, is the foundation of all morality.

Before we can take up the ethics of the class struggle theory, we have further to note that the theory violates the premises of its general position by its conception of classes. These are taken as given, as real, but as purely self-seeking entities, though without moral principles of any sort. They are unified by pure individual self-interest or some purely unconscious force. The Marxian economic class carries to a higher power the inherent unreality of the economic man. In the first place, given such classes, if any one of them entered into negotiation of any sort with any other, the activity would necessarily be regarded as purely a technique of manipulation, or essentially of combat, to be employed only when and as it should seem likely to be more effective or "cheaper" than any other procedure, and to be categorically dropped and all past results ignored, the moment these conditions ceased to apply. No agreement, commitment or promise made by such a class would have the least validity, and no statement it might make would have any status as truth. As Kant pointed out, if assertions and promises are recognised as having this character, they cannot be either effective or meaningful; the very notion is a self-contradiction. Negotiation in such terms can be meaningful only as deception; but the Marxists make this impossible by openly declaring their position in advance. The clear implication is that the only rational procedure is a literal fight or war from the outset, one which recognises no rules and gives no quarter. Any utterance is a pure inanity, unless possibly of the nature of a war-cry intended to terrorise and unnerve the enemy, or to heighten the courage and energy of the partisans by and for whom it is employed.

In the second place, it should be superfluous to elaborate upon the absurdity of the notion of an economic class. The historical unreality of the category, already pointed out, is no mystery. It is as impossible for a social class, containing a minimum of two individuals, to be perfectly homogeneous in interests as it is for a society in any sense whatever. That is, there are "class" distinctions within any class, different in degree at most from distinctions between classes. Any group which is able to hold together and to function in any way as a group must be unified either by moral ideals or by a possible predominance of a common interest in the attainment of some very specific objective over the conflicting interests of the members. It cannot be held together by literal force, unless it is composed of a single individual possessing sufficient power in some form to dominate all others, who must be weak enough and few enough to be so dominated, both individually and in any combination which they are able to effect. For any ruling group or power group is again a society, necessarily more or less heterogeneous and with its own conflicts of interests. Under realistic conditions, the only possible common interest which, apart from some ethical unifying force, is conceivably able to predominate over divergent individual interests, is the conflict interest, a "war" against some other group or groups. And this is in conformity with the Marxist conception itself. What is overlooked, or purposely not mentioned, is the obvious fact that if any such combat group succeeds in its objective of destroying the enemy power, it must either in turn be held together by the interest in keeping power and exploiting the defeated enemy or it will immediately disintegrate along some lines into new groups or "classes" of some form, struggling for power.

* * * * *

We come now to the ethical ideals of Marxism, its critique of existing society and its programme of social change. Viewing it as a social phenomenon, and ignoring, as we have to do to consider it in that light, all its façade of philosophical hocus-pocus, we find an interesting variant on the not uncommon theme of romantic destructionism. Its philosophy of social action reduces to a variety of the doctrine popularised if not invented by Rousseau, that men are naturally good except as they have been corrupted by society and its institutions, but that these are entirely wicked, and, consequently, the formula for the reform and regeneration of society is to destroy its institutions. The advocates of such a programme are oblivious to the fact that to destroy social institutions would be to destroy society in any possible human sense. They are victims of a naïve theory of social contract, according to which all social arrangements have been thought out, discussed and agreed upon, and consequently are subject to change, without limit as to extent or speed, by the same process. The view is completely unhistorical and essentially fantastic. There is no need to deny that men have any power at all to change their institutions; but it is certainly limited with respect both to the amount and the kind of change which is even "possible" for any society at any time, to say nothing of costs. To any competent mind, dissatisfaction with existing institutions should suggest as the first question the critical formulation of ideals, and then, and not really separable, the possibilities, methods, and costs of change.

The contribution of Marxism to this theme is its discovery and identification of a particular supposed source of social corruption. This of course is that some selfish "class", varying more or less in character through history, has taken possession by "force", in some form which is left unanalysed, of the virtuous masses of society as a whole and is "exploiting" them for its own purposes. The recipe for salvation through destruction in our own day therefore takes the particular form of "liquidating" the class which is said to be performing the role of devil in modern European civilisation, namely the "bourgeoisie". All political opposition to this programme is assumed as a matter of course to derive from the bourgeois class itself, either directly or through paid agents or dupes. (Non-Marxist economists are allowed to hover more or less between these two classifications, paid agent and dupe.)

What is really significant about such a theory is the fact that it is taken seriously, and not only by its proponents and by the masses, but even by so many students of recognised competence and presumptive freedom from conscious and crude political bias. As already remarked, this acceptance of the class-struggle programme is highly indicative as to the prospect of intelligent and moral political action by human beings. It not only does not seem to occur to the masses, or to the intelligentsia, who are taken in—to say nothing of the propagandists themselves—that the allegation of selfish interest which is glibly pinned on the opposition applies even more obviously to the promoters of the class war themselves. They are assumed to be free from any taint of self-interest! They are merely soliciting for themselves the role of absolute monarch over their country and the world, or of some satisfactory position at court or in the administration—the details to be worked out after the revolution. Their devotion to society and to humanity is so great that they offer to serve in the highest capacity, up to the unconstitutional imperatorship of the world.

The doctrine itself—that all that need be done in order to awake the next morning in, or on the way toward, an idealistic Utopia is to destroy the admittedly crude and imperfect civilisation which the race has developed through history thus far, by destroying its institutions and power relations and turning over all power to the promoters of the destruction for the purpose of reconstruction—has an evident if mysterious appeal to elemental human nature.[1] How such propaganda, and the romantic appeal of destruction in general, is to be effectively combated, is perhaps the most serious of practical social problems. And the most serious as well as most puzzling phase of this situation is that in their manners and conscious intentions the promoters are for the most part " nice people ", and " honourable men ", and will readily, and often artistically, " with reasons answer you." Not only that; they are morally earnest, even to a fault—in fact, to a degree which makes it a serious ethical problem whether moral earnestness can be assumed to be a virtue at all. For in a plain factual appraisal, what they are doing is more catastrophically evil than treason, or poisoning the wells, or other acts commonly placed at the head of the list of crimes. The moralisation of destruction, and of combat with a view to destruction, goes with the kind of hero-worship that merges into devil-worship. Such phenomena show that human nature has potentialities that are horrible, in full match for all those which are noble and fine. Which qualities spring the more from original nature and which from social institutions is a question of little meaning. Man is a social animal, a product of history. All that is good in him is obviously a reflection of social discipline and the product of the age-long travail through which has developed that civilisation which our romantic destructionists propose to sweep away by violent revolution.

---

[1] Marx probably did not teach exactly this extreme form of revolutionism, and his followers have tended away from it to a considerably different position, especially with the rise of modern communism, as will be noted presently; but the fact does not invalidate the substance of this paragraph.

As suggested above, Marx himself (or Marx-Engels) did not unambiguously expound any doctrine of an immediate and complete establishment of the ideal Utopia through a single revolutionary act. At least as early as 1852, he began to make vague references to a " dictatorship of the proletariat " as a transitional stage between capitalism and ideal socialism or communism. As the professed followers and interpreters of the highest recognised authority in the Marxist parties have never reached any agreement as to the concrete meaning either of this transitional state or of the perfected stages which follow it, or the process of transformation, there would be little point in the present writer setting forth any extensive speculation on these matters in the present essay. In fact, he makes no pretence to extensive Marxian scholarship or to any of the qualifications required for achieving an authoritative position in this particular branch of exegetics. On the basis of an admittedly brief and unsympathetic study, it would appear that what is really meant by the revolution is simply the seizure of political power through a *coup d'état* on the part of the leadership of some working-class party. And the dictatorship of the proletariat would be the dictatorship —over the proletariat and not by it, as well as over anyone else whom they might choose to allow to continue to live —of these same people, and their successors in the positions of power, however the latter might come to power, as long as they called their system by that name and were able to " get away with it ". The ultimate " classless " society has never been described in the least detail. It is simply the bright vision of an anarchist Utopia, a society in which there are no problems or issues, especially economic issues, on which people at all seriously disagree. This is the only meaning which the writer can attach to such slogan-phrases as, the withering away of the state, the administration of things without authoritative control over men, and production for use and not for profit. Historically most notable is the fact that in Russia the dictatorship has not only become progressively more dictatorial over everybody, and more ruthless, and less equalitarian, but has obviously tended more and more to put off to the Greek Kalends the removal of the dictatorship and establishment of the classless communistic society.[1]

In extenuation for Marxists—though hardly for Marxism—it would be possible to bring forward a *tu quoque*. (This famous " argument " has an embarrassing way of seeming to provide a sort of defence for the advocates of any position, however bad, morally or intellectually !) At least it should be understood that there is practically nothing in Marxism which is not either copied from or equivalent to older contemporary doctrines and widely regarded statements of position.[2] The Marxist ethical doctrine—meaning (*a*) anti-ethics or ethical nihilism, absolute egoism or moral solipsism—is identical with the theoretical position of the early nineteenth century utilitarians, who were practically the classical economists under another name. For this purpose it does not matter whether we consider the utilitarian position to be that of psychological hedonism or give any other theory or interpretation to the actual content or " object " of individual desire. The other form of ethical nihilism which is represented in Marxism, namely " dialectical determinism ", has already been shown to be practically identical with positivism, in the sense of culture-historical positivism, which was the " first philosophy " of nineteenth century liberalism, usually combined, to be sure, with egoistic voluntarism, in spite of the fact that the two are palpably contradictory.

---

[1] The main texts from Marx and Engels (and Lenin) bearing on the topics mentioned in this paragraph are to be found in Lenin's *State and Revolution*, and *Critique of the Gotha Programme by Karl Marx* (ed. C. P. Dutt); N.Y., International Publishers, 1932 and 1938.

[2] In this essay, we have had no occasion to refer particularly to the " economic theory " of Marx, because it seems to have—or to be especially conspicuous for having—nothing at all to do with the problems of social action or change. Of course it does pretend to afford a " proof " that all income except wages (at same level) represents " exploitation " of the workers. But since Marxism itself makes no pretence of defining exploitation, and cannot possibly give it any meaning which is at all consistent with the other features of its general philosophical position in any of their possible interpretations, this may be passed over as a detail. In any event, practically all the elements of Marxist pseudo-economic analysis, and especially those which are most screamingly absurd, could have been copied out of Ricardo or other acknowledged authorities on the Ricardian economics who wrote before the publication of the " Critique of Political Economy " in 1859, in which Marx's system may be said to have taken on something like its final form.

Of course this line of argument " defends " Marxism at the cost of the complete sacrifice of his originality. If there is any main element in Marxism which is new, to any substantial degree, it is the class struggle theory. That also is well known to every student to have a long history prior to Marx, but the Marxian version of it may perhaps be defended as substantially different. In any case we are not concerned here with the details.

* * * * *

In a recent pamphlet entitled *Warning to Europe*, Thomas Mann refers to the bitter thought that to a degree the crisis in which European civilisation finds itself is the consequence of the fact that the nineteenth century was too generous to the masses. Perhaps it might be said in defence, or extenuation, that the liberal reformers of the nineteenth century did not allow for the fact that members of the cultured class itself would make careers for themselves by preaching to the masses the annihilation of the cultured classes and their culture, as the way to a just, humane and more highly cultured order of things ; or perhaps they did not allow for the readiness which the masses would show in listening to such preaching and following it. Proclaiming to the unfortunate and under-privileged that workers have no stake in civilisation, " nothing to lose but their chains " and " a world to win " through " violent revolution sweeping away all former social order ", was a political technique to which the naïve Victorians perhaps did not think responsible men would stoop, or thought that, if one occasionally might do so, no considerable number of sane men, though uneducated, would listen receptively.

Currency Devaluation and Public Finance, 1929-1937

By J. K. Horsefield

SECTION I—INTRODUCTORY

1. The purpose of this paper is to study the nature of the influence exerted by currency devaluation on the finances of Central Governments throughout the world during the period 1929–37. The treatment is throughout qualitative, not quantitative, and nothing more than broad generalisations are attempted. In particular, the different mechanisms by which devaluation has been introduced or buttressed are necessarily ignored. Indeed, the term "currency devaluation" itself is taken in a sense rather wider than the strict one. It will be regarded as including not only the *de jure* reductions of the gold value of currencies (e.g., Belgium, 1935), but also *de facto* adjustments of a similar nature (e.g., United Kingdom, 1931).

2. In the Tables which follow, the year in which devaluation took place is marked by the figures being shown in heavy type. This date is, of course, quite clear only in the comparatively few cases where the readjustment has been instantaneous. For the purpose of this paper it has been taken as that at which the first marked fall in the gold value of the currency occurred. It should be noted that results appearing in the year of devaluation are more likely to be substantial if it was effected in the early, rather than the later, months. Comparison of the short-run effects in different countries must therefore be undertaken with care.

3. The period chosen for survey excludes the devaluations following the post-war currency collapses. It does not therefore provide any instances of the difficulties of public finance in such periods, but is concerned only with the relatively minor effects of limited adjustments. On the

other hand, the years 1929–1937 cover practically a complete trade cycle, and it will become apparent that this is an important consideration.

In addition to this limitation of period, the survey has been restricted by excluding currencies manipulated by extensive and continuing exchange controls. Nevertheless, a wide range of countries is nominally available for examination, since there is scarcely any currency in the world which has the same free gold value now as in 1929. Unfortunately, however, the range within which useful selection can be made is not only far smaller, but falls seriously short of what is desirable. Ideally, figures should be studied for each phase of the trade cycle for countries representing all possible types, but this would necessitate a much larger number of examples than is available at all, and a very much larger group than that for which adequate figures are forthcoming.

4. The selection in the following Tables has been governed largely by the accessibility of the desired figures; but where these were widely obtainable, currencies have been chosen to illustrate as large a range of trade cycle phases and of types of countries as possible. Countries have been omitted whose experience does not differ informatively from that of some fairly typical one; whilst others have had to be pressed into service as being the nearest available approach to a typical example of some otherwise unillustrated group. For purposes of comparison, the figures for Poland are also given—this being the only major country which neither devalued during the period nor (until 1936) utilised exchange control.

Figures have not been shown beyond 1937, even in the few cases where they are available, since the change in the trend of world trade makes them misleading rather than helpful after that year. Very little can therefore be done towards studying the results of devaluation in the later years, and especially after the break-up of the gold *bloc* in 1936. However, in these cases the more significant statistics are those which show the results of delaying devaluation, which can to some extent be deduced from earlier years. It is also possible to include an official estimate of the consequences of devaluation in one country (Belgium) where this was undertaken in 1935.

5. The statistical approach adopted must necessarily

suffer from the impossibility of discovering what would have been the position of a country if it had not devalued when it did. In certain cases, however, comparison is possible between countries of similar economic structure, devaluing at different dates. Divergent trends detected in such countries during the intervening period may plausibly be attributed, *cet. par.*, to the effects of devaluation. This has been the method here adopted.

6. Monetary measures may be expected to affect the budget in two ways: directly by increasing or reducing certain Government receipts and commitments; indirectly by increasing or reducing taxable capacity. These consequences will show themselves with various lags according to their nature and to the rapidity with which (for example) tax-yields reflect changes in the national income.

Section II is therefore devoted primarily to an examination of changes in taxable capacity, and incorporates also a comparison between currencies devalued to different degrees. Section III studies gold reserves, Government debts and general budget figures. In Section IV, devoted to conclusions, an attempt is made "to point the moral and adorn the tale".

Section II—Taxable Capacity

7. The principal task of this Section is to summarise the course of business in relation to Devaluation. Table 1 therefore provides indices of industrial production and of employment for a representative group of countries. Subsidiary indices have also been examined, showing the production of investment goods and of consumption goods separately. The former is important for its bearing on the multiplier, but in trend these subsidiary indices do not differ appreciably from the combined index, and they have therefore not been reproduced.

8. Since for agricultural countries indices of production are uninformative, these are supplemented in Table 2 by statistics of the value of exports and imports year by year. Prices, though of equal significance, are more difficult to study owing to the absence of adequate indices. However, Table 3 brings together the cost-of-living and export prices of a number of countries. The former reflect the levels of internal costs, and also incorporate import prices; they therefore approximately indicate the impact of business

influences, at home and abroad, upon the country's internal economy. The impact of world trends upon the export industries is suggested by the export price index.

9. Tables 4 and 5 are devoted to an attempt to elucidate the importance of the relative degree of devaluation in different countries as an influence upon their respective experiences. The former briefly summarises the extent of devaluation in the world as a whole, and the latter compares the corresponding figure for each of 15 countries with the fluctuations in its share of world trade.

TABLE 1.

INDICES OF INDUSTRIAL PRODUCTION AND THE GENERAL LEVEL OF EMPLOYMENT (1929=100).

Country	Type of Index	Calendar Years.								
		1929	1930	1931	1932	1933	1934	1935	1936	1937
Canada	Prod'n.	100	85	71	58	60	73	81	90	99
	Empl. A.	100	94	85	72	71	81	84	87	96
Finland	Prod'n.	100	91	80	83	96	117	125	137	149
	Empl. B.	100	87	77	78	83	93	101	102	109
U.K.	Prod'n.	100	92	84	83	88	99	106	116	124
	Empl. A.	100	96	92	92	95	99	102	107	112
Greece	Prod'n.	100	103	107	101	110	125	141	139	151
Estonia	Prod'n.	100	99	91	78	82	96	106	120	139
	Empl. B.	100	96	88	81	88	97	110	127	145
U.S.A.	Prod'n.	100	81	68	54	64	66	76	88	92
	Empl. B.	100	87	74	63	69	79	82	88	95
Czechoslovakia	Prod'n.	100	89	81	63	60	66	70	80	96
	Empl. A.	100	98	92	83	75	75	77	82	90
Belgium	Prod'n.	100	89	81	69	72	73	82	87	94
	Empl. C.	100	97	87	78	81	78	80	85	88
Holland	Prod'n.	100	91	79	62	69	70	66	72	91
	Empl. C.	100	98	90	79	78	76	73	71	78
Latvia	Prod'n.	100	109	89	82	112	130	137	148	156
	Empl. A.	100	105	98	83	88	96	101	107	116
Poland	Prod'n.	100	88	77	62	69	77	83	92	109
	Empl. A.	100	87	74	64	64	69	73	78	88
World (ex. USSR)	Prod'n.	100	86	75	63	71	77	85	95	102
,, (16 C'tries)	Empl. A.	100	92	83	75	78	85	88	93	100

Types of Employment Index :—

A = Numbers employed (excluding Agriculture).
B = ,, ,, (Manufacturing only).
C = Days worked during month (excluding Agriculture).

SOURCE: League of Nations, *Statistical Year-Book.* (Production Index for Poland from *Monthly Bulletin of Statistics*, October, 1938.)

The Section concludes with a brief reference to taxable capacity arising otherwise than from current business.

10. It will be seen (Table 1) that the quantum of industrial production shows an upturn in nearly all the countries quoted after 1932, which year represented the lowest point in the depression for the world as a whole. This is true, for example, of Canada, Greece, Estonia, Italy, Belgium and Holland, despite the fact that devaluation took place in these countries in 1931, 1932, 1933, 1934, 1935 and 1936 respectively (Italy not given in the Table). It is also true of Poland, which did not devalue at all. The only exception shown is Czechoslovakia, a special case to which further reference will be made in the sequel.

As regards employment, 1933 also marks the upturn in the world aggregate, and in most of the individual countries. In Canada there was an apparent lag of a year, but if monthly figures had been taken it would have been seen that recovery actually began in 1933. In Holland the persistent decline in employment until devaluation actually took place was due to the agricultural restriction schemes, discriminating against labour-intensive crops.

TABLE 2.

VALUE OF MERCHANDISE EXPORTS AND IMPORTS (EXCLUDING BULLION) IN MILLIONS OF NATIONAL CURRENCIES.

Country.		Calendar Years.								
		1929	1930	1931	1932	1933	1934	1935	1936	1937
New Zealand	Exp.	54	44	34	35	40	47	46	56	65
	Imp.	48	48	26	24	25	31	36	44	56
Denmark ..	Exp.	1616	1524	1260	1086	1163	1175	1213	1327	1541
	Imp.	1715	1656	1410	1104	1225	1307	1287	1442	1642
Sweden ..	Exp.	1812	1505	1122	947	1079	1302	1297	1514	1994
	Imp.	1783	1662	1427	1155	1096	1305	1476	1633	2111
Yugoslavia	Exp.	7921	6779	4801	3056	3378	3847	4029	4376	6272
	Imp.	7590	6955	4793	2828	2823	3482	3603	3984	5148
Estonia ..	Exp.	117	96	71	43	46	69	80	83	106
	Imp.	122	98	61	37	39	55	69	87	111
Czecho-slovakia ..	Exp.	20485	17460	13106	7329	5842	7267	7396	7996	11953
	Imp.	19942	15680	11725	7459	5799	6849	6716	7894	10965
Belgium—Luxembourg	Exp.	31784	26068	23069	14813	14032	13540	15786	19525	25394
	Imp.	35531	30975	23748	16163	14822	13703	17112	21299	27257
Latvia ..	Exp.	274	248	164	96	81	85	99	188	261
	Imp.	362	296	176	84	91	95	101	121	230

SOURCE :—*Statistical Year-Book.*

The inference to be drawn from Table 1 seems to be that the trade cycle was in nearly every case of much greater importance than devaluation in influencing fluctuations in the taxable capacity of industrial production. This conclusion is supported by studies (not here reproduced) of the trend of bank clearings and of the average yield from industrial shares. It is proposed, however, to defer deductions until Section IV, and at this stage merely to bring out the salient points of each Table.

TABLE 3.

INDICES OF THE COST OF LIVING AND OF EXPORT PRICES

(1929 = 100).

Country.	Index	Calendar Years								
		1929	1930	1931	1932	1933	1934	1935	1936	1937
Australia	C/L	100	95	85	81	78	80	81	83	85
	E/P	100	76	53	53	52	69	56	70	85
Denmark	C/L	100	95	89	89	92	96	99	100	104
	E/P	100	89	70	61	73	80	86	91	?
U.K.	C/L	100	96	90	88	85	86	87	90	94
	E/P	100	95	86	80	78	78	78	80	86
Yugoslavia	C/L	100	91	84	75	65	61	61	61	65
	E/P	100	88	77	58	56	61	61	65	?
Estonia	C/L	100	89	85	80	75	74	75	84	89
	E/P	100	82	70	52	58	66	70	70	?
U.S.A.	C/L	100	97	87	78	75	79	82	85	88
	E/P	100	89	69	59	62	72	75	76	80
Czechoslovakia ..	C/L	100	98	93	92	91	90	92	93	94
	E/P	100	94	79	72	?	?	?	?	?
Belgium	C/L	100	104	93	84	83	79	80	85	92
	E/P	100	87	69	56	57	53	61	68	89
Latvia (1930 = 100)	C/L	?	100	91	79	76	72	73	78	79
	E/P	100	88	66	49	44	41	44	58	?
Switzerland	C/L	100	98	93	86	81	80	79	81	85
	E/P	100	94	84	74	68	65	63	67	?
Poland	C/L	100	92	82	74	67	62	60	58	62

SOURCES :—Cost of Living : *Statistical Year-Book.*

Export Prices : *Review of World Trade* (except : Belgium, from the *Bulletin de l'Institut de Recherches Economiques* ; this refers to Industrial prices only).

11. Table 2 has been limited to countries in which gold movements are not significant in relation to the values of merchandise exports, thus excluding any confusion between exports of newly-mined gold and capital transfers taking

the form of bullion[1]. While the result is to confine the Table to a small number of countries only, it is sufficient to show how marked was the fall in the value of exports throughout the world during the slump. (See also Table 4, below.) The reliance of most of the countries shown on their export industries, though not uniform or constant, is considerable. Hence the decline in their exports is a significant indication of the fall in their national incomes, which is borne out by the corresponding decline in imports.

Here also the upturn took place after 1932 for the majority of countries, but not—a significant fact—for any of the three which deferred devaluation until after 1933. The difference between this result and that of Table 1 lies, of course, in the fact that in these countries prices were still falling.

12. The export prices in the above table, originally estimates, have been rendered additionally approximate by being converted from the base 1927=100 (Belgium and Latvia, 1930=100). All prices are expressed in national currencies, and the continued fall after devaluation is thus doubly significant. The price of exports from Australia was, e.g., in 1931, only 53 per cent. of their price in 1929 (annual averages), despite the fact that in 1931 this price was expressed in pounds which had themselves fallen 28 per cent. in relation to gold and 22 per cent. in relation to the £ sterling. Similarly, imports into Australia from the United Kingdom cost nearly 30 per cent. more in 1931 than in 1929, and yet the cost of living declined 15 points over the same period.

The fall in export prices was heaviest, of course, in primary producing countries, but the consequent decline in their ability to import must have affected seriously the exporting industries elsewhere; and since prices fell less in other countries, quantities may well have fallen more. The relative effects on taxable capacity are problematical.

TABLE 4.

WORLD EXPORTS.

A. INDEX OF VALUE (1929 = 100).

	1931	1932	1933	1934
(1) In Gold	57·3	39·0	35·5	34·3
(2) In National Currencies	60·7	45·3	45·4	47·5

---

[1] The gold exports were, of course, stimulated after 1929, first by falling costs and later by the increased price of gold due to devaluations.

B. Average Degree of Depreciation From Gold Par of Currencies in Which Were Sold The Following Classes of Exports.

	1931	1932	1933	1934
Foodstuffs	10·0%	18·6%	28·0%	35·4%
Raw materials and semi-manufactures	7·0%	14·0%	20·7%	31·1%
Manufactured goods..	2·4%	9·6%	15·8%	23·1%
ALL EXPORTS	5·7%	13·8%	21·9%	27·7%

SOURCES :—A : (1) *Statistical Year-Book*, " World Trade, by Countries, in old U.S.A. gold dollars ".

(2) Above inflated by the inverse of the corresponding percentage for " All exports " in part B of the Table, e.g.,

$$60{\cdot}7 = 57{\cdot}3\left(\frac{100}{100 - 5{\cdot}7}\right)$$

B : S. E. Harris, *Exchange Depreciation*, p. 109. The figures are weighted by the gold value of the exports concerned.

13. It would appear from the above Table that the value of world trade recovered, in terms of national currencies, after the end of 1932, which corresponds with the indications already found. (In gold values, the upturn did not come until after the end of 1934.) By 1932, however, trade had fallen so catastrophically that for a country to have maintained the value (in its national currency) of an unchanged average share in world exports would have necessitated a devaluation of over 60 per cent. from its gold par. Few countries were in a position to undertake so drastic a devaluation without jeopardising their position by immensely inflating the cost of necessary imports. (The influence of the degree of devaluation actually attained is further considered in Table 5 below.)

14. Table 4 also suggests that countries exporting foodstuffs secured a smaller competitive advantage than others from any given degree of devaluation. Even by 1931 food-producing countries had to overleap an average depreciation of 10 per cent. before reaping any competitive advantage, while those exporting manufactures were faced with a general decline of only 2½ per cent. A year later the figures were respectively 18½ per cent. and 9½ per cent. Producers of raw materials and semi-manufactures occupied a mid-way position between the other two classes.

15. The next Table (Table 5) compares (*a*) the purchasing power of a gold unit in terms of each national currency, year by year, as a percentage of its nominal purchasing power in 1929, with (*b*) the share of each country in the total of world exports (gold values) as a percentage of its

TABLE 5.

INFLUENCE OF THE DEGREE OF DEVALUATION ON A COUNTRY'S SHARE OF WORLD EXPORTS. (1929 = 100).

		Calendar Years								
Country.	Index	1929	1930	1931	1932	1933	1934	1935	1936	1937
New Zealand	Dev'n.	101	**104**	117	152	183	203	210	206	207
	S.W.E.	100	**99**	95	107	114	123	115	132	129
Canada	Dev'n.	101	100	**104**	113	**137**	166	169	169	169
	S.W.E.	100	92	**89**	102	**97**	110	115	131	117
Finland	Dev'n.	100	100	**105**	162	172	189	196	194	195
	S.W.E.	100	105	**111**	113	134	152	142	153	161
Japan	Dev'n.	108	101	**102**	177	247	281	292	290	293
	S.W.E.	100	98	**98**	96	106	113	123	123	118
U.K.	Dev'n.	100	100	**107**	139	147	162	167	165	167
	S.W.E.	100	98	**87**	92	97	98	100	97	93
Greece	Dev'n.	100	100	100	**156**	231	231	233	236	243
	S.W.E.	100	103	104	**98**	90	98	125	117	122
Siam (Year from	Dev'n.	99	100	100	**127**	149	163	165	165	165
April 1st) ..	S.W.E.	100	91	91	**111**	114	132	120	133	97
Estonia	Dev'n.	100	100	100	100	**121**	161	166	164	166
	S.W.E.	100	102	105	93	**88**	105	117	114	117
U.S.A.	Dev'n.	100	100	100	100	**124**	168	168	169	169
	S.W.E.	100	91	85	78	**70**	70	73	73	81
Czechoslovakia ..	Dev'n.	100	100	100	100	100	**117**	120	**125**	144
	S.W.E.	100	106	112	92	80	**88**	86	**82**	88
Belgium	Dev'n.	100	100	100	100	100	100	**127**	139	139
Luxembourg ..	Dev'n.	100	100	100	100	100	100	**108**	111	112
Belg.-Luxembourg	S.W.E.	100	102	127	119	124	124	**110**	117	124
France	Dev'n.	100	100	100	100	100	100	100	**108**	**164**
	S.W.E.	100	106	106	101	104	104	88	**74**	**62**
Latvia	Dev'n.	100	100	100	100	101	101	101	**112**	167
	S.W.E.	100	113	104	90	84	90	101	**118**	123
Switzerland ..	Dev'n.	100	99	99	99	100	100	100	**108**	142
	S.W.E.	100	105	112	95	111	115	109	**102**	94
Poland	Dev'n.	100	100	100	100	100	100	100	100	100
Poland—Danzig ..	S.W.E.	100	108	117	98	96	109	94	96	92
WORLD	Dev'n.	100	?	106	116	128	138	?	?	?

SOURCES :—Based on Tables in *Statistical Year-Book* :

"Dev'n." = Command of a gold unit over each National Currency as a percentage of nominal 1929 par = Inverse of "Value of currencies as a percentage of their gold parity in 1929". World figures derived from Table 4b.

"S.W.E." = Share of World Exports as a percentage of share in 1929; derived from "World Trade, by Countries, in old U.S.A. gold dollars". Note.—The countries shewn aggregated 48% of World Exports in 1929, and 44½% in 1937.

share in 1929. The figures have been given in this form to enable a comparison to be made of the extent to which any country, by offering its commodities more cheaply through lowering the gold value of its currency, is able to increase its share in world trade.

16. The correlation of these two sets of figures can be attempted in two ways :—(*a*) *Impact of devaluation.* In 16 cases it is possible to compare the share of world exports enjoyed in the year before and in the year after devaluation; in eight cases this shows an increase and in eight cases a decrease.

(*b*) *Degree of devaluation.* The unweighted averages of the 1937 figures were :—purchasing power of gold unit, 180; share of world exports, 109. Of the fifteen countries shown (excluding Poland), 4 have both figures above these averages (*e.g.*, New Zealand, 207 and 129); 6 have both below (e.g., United Kingdom, 167 and 93); and 4 have one above and one below (e.g., Canada, 169 and 117).

Clearly there is no significant connection in (*a*). In (*b*) it would appear that a devaluation larger than the average is more likely than not to induce in the long run a relative increase in the country's share of world trade, and *vice versa.* This however is as far as the correlation can be pressed, since the exact degree of devaluation does not show any link with the degree of change in the share of world trade.

17. Before leaving the subject of taxable capacity, we may note that for private individuals this only varies differently from business trends, to any appreciable degree, in two cases. The first is where prices show a marked rise (fall); fixed incomes then bear a smaller (larger) relation towards the national budget, and taxes on them are correspondingly a less (greater) proportion of the national revenue. Secondly, where individuals own foreign investments on which dividends are declared in foreign currencies, the yield in terms of their home currency is increased by the devaluation of the latter. Income tax yields thereby benefit.

But for our purposes the first of these cases is not material because, as shown in Table 3, home prices have not altered much following devaluation. The second would seem more relevant, but cannot have actually brought much increase to budget receipts because the aggregate holdings of such securities are not large (many foreign issues being expressed in the home currency); because of income tax reliefs designed to avoid double taxation; and for the following four reasons, which also apply to Government debts (para. 25):—

(*a*) Where the borrowing country simultaneously or subsequently devalued to the same (or greater) extent, no increase in yield resulted, at least in the long run.

(*b*) Where the borrowing country had previously devalued, the creditor suffered a loss which his own devaluation only enabled him to recoup, to a greater or less degree.

(*c*) Some debtor countries have found it possible to convert their external debt to a lower rate of interest.

(*d*) Others, not having the means to continue payments, have had recourse to suspending or cancelling interest or sinking-fund payments on their external debts.

18. So far, then, as taxable capacity is concerned, our conclusions appear largely negative, except that to devalue more than the average is likely to contribute some relief to an exporting country. But before attempting to develop this suggestion, we may adduce what evidence can be found on the subject of direct Government receipts and commitments.

SECTION III—THE BUDGET

19. The present section is concerned with the effect of devaluation on a number of financial factors directly influencing Government receipts and expenditure. We shall study first the uses made by different countries of the "profits" derived from revaluing their gold reserves; then the effect of devaluation upon the terms of Government borrowing and upon credit generally; and lastly general statistics of budget receipts and expenditure, adducing in this connection the Belgian figures already mentioned.

20. As regards the first subject it should be noted that where reserves were held abroad devaluation by the foreign country entailed a loss to the owner of the reserves. Thus, the devaluation of the £ involved the Bank of Greece in a loss of 175 million drachmae. But in most such cases both the owner and the holder of the deposits devalued simultaneously, so avoiding any loss to the former—though of course no profit could be made except in so far as the country owning the deposit devalued to a greater extent than that holding it.

21. Central Bank reserves held at home, however, were only subject to such limitations in so far as they took the form of foreign exchange. The revaluation of gold stocks offered opportunities of " profit " of which most countries have by now availed themselves. An analysis of this profit,[1] in all countries where details are available, shows that its significance varied widely—ranging between 1½ per cent. and 105 per cent. of the budget receipts for the year in question. Frequently it has provided a substantial contribution to the public finances of the devaluing country. The temptation to utilise it for inflationary purposes has, however, been generally resisted, and except in five countries it has been treated wholly as a capital asset.

In a large number of instances the opportunity has been taken to increase the liquid resources of the Central or Commercial Banks—sometimes by replacing assets previously frozen—and to that extent the basis of credit has been maintained or increased. Exchange equalisation funds have also been created in several cases ; these have likewise benefited borrowers, by reducing the extent to which recourse has been necessary to bank rate to check fluctuations in exchanges. They have therefore indirectly contributed to reduce Government expenditure in interest, a result achieved even more effectively by the " stabilisation funds " and the repayment of debts, which have been other uses for parts of the revaluation profits. Table 6 studies interest rates in more detail.

22. Four general considerations are relevant to the study of this Table : (*a*) a general fall in bank rate was to be expected over the period 1929–1932, since this is the normal concomitant of an advancing depression. Similarly the desire for liquidity would naturally reduce the yield on Government bonds. (*b*) Immediately before an expected devaluation, bank rate probably had to be raised because of a flight of capital into more stable currencies. (*c*) The occurrence of devaluation, at least in a large country, will (if a repetition is not expected) have attracted capital from undevalued countries and so necessitated a rise in their bank rate while facilitating a lowering of its own. (*d*) The suspension of gold payments on devaluation will probably have eased pressure on reserves in many countries, and so

---

[1] This analysis (not reproduced) was based on information in the League of Nations publications *Public Finance* and *Commercial and Central Banks*, partly summarised in *Monetary Review, 1937–38*, pp. 90–91.

enabled the Central Bank to expand credit. Hence both the general trend of rates and the fact that these were higher before than after devaluation is to some extent explicable on general grounds.

TABLE 6.

CENTRAL BANK DISCOUNT RATES AND THE YIELD ON GOVERNMENT BONDS.

		Calendar Years								
Country.	Rate	1929	1930	1931	1932	1933	1934	1935	1936	1937
		%	%	%	%	%	%	%	%	%
Australia	B/R	6·50	**6·50**	6·00	5·25	4·75	4·53	4·25	4·25	4·25
	Gov.	5·12	**5·55**	6·06	4·42	3·75	3·35	3·58	3·88	3·84
Norway	B/R	5·57	4·53	**4·65**	4·68	3·70	3·50	3·50	3·53	4·00
	Gov.	5·21	5·05	**5·01**	5·02	4·95	4·67	4·44	4·52	4·46
U.K.	B/R	5·50	3·42	**3·93**	3·01	2·00	2·00	2·00	2·00	2·00
	Gov.	4·60	4·48	**4·39**	3·76	3·38	3·08	2·91	2·95	3·31
Yugoslavia	B/R	6·00	5·70	6·40	**7·50**	7·50	6·82	5·13	5·00	5·00
	Gov.	8·09	7·98	8·98	**13·26**	14·72	9·99	8·85	8·46	7·75
South Africa	B/R	5·69	5·87	5·32	**5·77**	3·82	3·50	3·50	3·50	3·50
	Gov.	4·94	4·97	5·01	**4·59**	3·89	3·49	3·22	3·03	3·30
U.S.A.	B/R	4·94	3·82	3·09	3·40	**3·11**	2·55	2·00	1·91	1·76
	Gov.	3·60	3·28	3·31	3·66	**3·31**	3·10	2·70	2·47	2·57
Czechoslovakia ..	B/R	5·01	4·46	4·77	5·15	3·57	**3·50**	3·50	**3·00**	3·00
	Gov.	5·76	5·68	5·73	6·50	6·02	**5·32**	5·21	**4·45**	4·48
Belgium	B/R	4·35	2·96	2·50	3·47	3·50	2·93	**2·19**	2·00	2·00
	Gov.	4·52	3·94	3·98	4·51	4·54	4·08	**3·90**	3·72	3·33
Latvia	B/R	6·00	6·00	6·00	6·00	5·50	5·50	5·50	**5·42**	5·00
Switzerland	B/R	3·50	2·89	2·03	2·00	2·00	2·00	2·33	**2·30**	1·50
	Gov.	4·38	4·07	3·78	3·62	3·84	4·05	4·52	**4·27**	3·31
Poland	B/R	8·64	7·21	7·50	7·21	5·82	5·00	5·00	5·00	4·98
	Gov.	10·89	11·87	14·30	16·99	14·82	10·91	10·65	10·02	9·00

SOURCES:—*Money and Banking*; *Statistical Year-Book*.

NOTES:—B/R in U.S.A.—Average of 12 Federal Reserve Banks.

Govt. Bonds—Australia, to July, 1931, 5% Bonds redeemable 1948, since 4% redeemable 1950; Norway, to December, 1933, six 5% Bonds (3 Govt., 3 mortgage), since five 4½% Bonds (3 Govt., 1 mortgage, 1 municipal); U.K., 2½% Consols; Yugoslavia, 7% 1921 Loan; South Africa, 5% Inscribed; U.S.A., ten Treasury Bonds; Czechoslovakia, Govt. Bonds (*sic*); Belgium, 3% Rente Belge; Switzerland, Federal Railways 3½%; Poland, 5% 1924 Conversion Loan.

23. Nevertheless some significance must attach to the definite correlation which emerges between the incidence of devaluation and the appearance of the factors studied. The Table shows eleven devaluation years for bank rates,

and in nine cases bank rate fell, either in that year or the succeeding one. Similarly, of ten devaluation years for the yield from Government bonds, eight showed a fall in the yield. The exceptions need not detain us long. The Yugoslav figures rose in both categories, presumably owing to political factors. The rise in the Norwegian bank rate was not large, and it may be noted that Norway has not revalued its gold reserve, and before 1932 had had for some years a heavy adverse balance of trade. The yield on Australian Government securities rose in sympathy with the prevalent anxiety as to the Commonwealth's financial position, prior to the introduction of the Premiers' plan.

24. Table 6 therefore suggests two consequences of devaluation, other things being equal. First, a fall in the discount rate of the Central Bank, facilitating a general fall in the structure of rates of interest. This should gradually assist industry, and thus lead later to an improvement of budget receipts. Secondly, the yield from Government bonds having fallen, new Government borrowing must have been cheapened. In many countries, indeed, it became possible to carry through conversion schemes effecting a permanent reduction in the rate of interest payable even on some of the funded debt. It should also be pointed out that the floating debt, which is not represented in Table 6, will also have cost less in interest, in consequence of the fall in bank rates. Where, of course, confidence was restored by devaluation this will have reinforced and expedited these tendencies.

25. On the other side of the account must be set the increased burden of interest on overseas debts contracted or guaranteed by Governments. Thus, for instance, the service of the overseas Australian debt in 1928–30 was costing over £35 millions a year—between one-third and one-quarter of the value of their exports—and the 24 per cent. fall in the value of the Australian pound which had taken place by August 1931 added about 30 per cent. to the cost in that currency of the interest due in sterling. This example will, however, suggest the reliefs which have in practice been experienced. They correspond, *mutatis mutandis*, to those set out at the end of paragraph 17 above.

26. To complete this subject we may mention that in the comparatively rare cases where a Government owns a foreign investment, it has derived a larger income from

this after devaluation than before. For example, the British Government holding of Suez Canal shares produced £1,871,000 in 1930–31, and £2,239,000 in 1931–32, despite a slight fall in the rate of dividend.

27. We pass now to a general study of Government receipts and expenditure, of which the above items are particular examples. If the inferences to be drawn from the following Table were sufficiently reliable, the earlier sections of this paper would be unnecessary. Unfortunately, however, changes in fiscal policy—to say nothing of rearrangements of budget accounts—are so interwoven with the phases of the recent depression that it is impossible to utilise this direct evidence without elaborate confirmation. All that can be claimed for the statistics quoted is that they furnish supplementary indications of the trend observable in public finance over this period.

28. It will be convenient first to try to classify those items in budget accounts which are most likely to respond to monetary manipulations. On the credit side, additional yields may be expected from *ad valorem* customs duties; also (if business does derive any benefit from devaluation) from sales taxes, export taxes, and eventually income taxes, though a lag of perhaps two years is likely in the last. On the side of outgoings, immediate increases may be expected in the cost of imports bought for Government use, and in the expenditure incurred in maintaining embassies abroad. Conditional increases will be incurred in the emoluments of civil servants if the cost of living rises, and in export bounties if these are granted and the quantum of exports increases. If, however, business improves, a relatively substantial reduction should be experienced in the cost of unemployment relief.

Unfortunately, it is impossible in a general survey such as this to analyse these separate items. To disentangle the effects of devaluation from those of changing fiscal policies, "economy campaigns," or alterations in the proportions of expenditure borne respectively by Central and Local Governments would take far too much time and space. Any table purporting to show such effects would be valueless without very extensive interpretations.

29. We shall therefore merely include a table summarising Central Government receipts from taxation and expenditure from all sources. Receipts from loans have been excluded

in order to indicate the extent to which recourse had to be had to this expedient from year to year. The figures include extraordinary, crisis and supplementary budgets, etc., as well as ordinary ones. Perhaps the principal significance of the statistics lies in the shrinkage of receipts and smaller diminution of expenditure during the slump years, indicating the strain placed upon the public finances. The tendency for the lowest point in receipts to be reached about 1933 suggests the lag which might have been expected following the bottom of the slump in 1932. There is again very little evidence of any direct connection with the time of devaluation.

TABLE 7.

BUDGET RECEIPTS AND EXPENDITURE IN MILLIONS OF NATIONAL CURRENCIES.

(Upper Line, Receipts; Lower Line, Expenditure.)

Country.	Financial Years Commencing								
	1929	1930	1931	1932	1933	1934	1935	1936	1937
New Zealand ..	25 25	**28** **25**	21 25	20 23	21 24	26 24	26 26	31 31	E 35 34
Norway	377 395	357 385	**347** **397**	334 380	350 369	366 394	424 447	490 492	E 496 496
U.K.	815 829	858 881	**851** **851**	827 859	809 778	805 797	845 842	897 902	949 920
South Africa ..	30 30	29 30	27 28	**27** **27**	40 33	39 35	40 49	43 52	E 41 60
Estonia	91 96	85 97	79 87	66 68	**65** **65**	74 74	79 79	90 90	E 90 90
Czechoslovakia ..	10444 10275	9654 9928	9133 12260	8367 10258	7379 9588	**7492** **8880**	7054 10098	7554 **12434**	E 8456 9687
Belgium	13613 12299	10972 13901	9668 12039	8832 11626	10341 11187	10542 11513	**9898** **13578**	E 10432 12826	E 10740 13350
Holland	822 915	800 829	746 1279	755 1273	738 1270	885 1865	877 1028	**920** **981**	E 857 1014
Latvia	191 183	173 175	128 152	124 135	124 137	133 139	146 147	**163** **154**	E 172 180
Poland	3029 2993	2750 2814	2241 2468	1930 2245	1869 2206	1940 2176	1994 2296	2247 2235	E 2395 2395

" E " indicates that the two figures immediately below are Estimates.
SOURCE :—League of Nations, *Public Finance* and *Statistical Year-Book.*

30. We conclude this section with an official estimate of the effect of devaluation in Belgium, 1935, which illustrates the operation of many of the factors which have been discussed. For reasons to be adduced in Section IV, however, it must not be thought that this is necessarily typical of the upshot of all devaluations.

TABLE 8.

OFFICIAL ESTIMATE OF THE EFFECT OF DEVALUATION ON BELGIAN PUBLIC FINANCE, 1935
(million francs).

	Gross Gain	Gross Loss	Nett Gain
CAPITAL ACCOUNT			
Revaluation of gold stock	4,217		
Revaluation of foreign exchange	325		
Loss on repaying gold florin loan		152	
	4,542	152	4,390
INCOME ACCOUNT			
Improvement in tax yields	440		
Reduction in unemployment pay	152		
Conversion Scheme	577		
Agreement with "Banque Nationale"	30		
Less, Tax concessions		200	
Increase in wages, salaries, pensions		96	
" " external debt service		197	
" " cost of ambassadors, etc.		18	
	1,199	511	688

SOURCE :—Adapted from statement by Minister of Finance, 27th June, 1935, as reproduced with comments by Professor F. Baudhuin in *La Dévaluation du Franc Belge : Un An Après*, pp. 134–138, 149–150.

SECTION IV—SOME CONCLUSIONS

31. It will simplify the theoretical considerations upon which we must now embark to deal first with the period 1930–32, leaving the upturn from the slump for later attention. We propose therefore to analyse the possible influences of devaluation upon a country immersed in the downswing of a slump. On what grounds can it be thought likely to bring about a recovery? Some impetus might be given if home prices rose above costs; but in face of a declining national income prices cannot usually be raised, if only through the force of distress selling; and in fact, as we found, devaluation did not at any period materially

affect them. Ultimately, therefore, the effect of devaluation upon public finance must depend upon whether it succeeds in modifying or reversing the cumulative depressive forces which are unloosed at the commencement of a slump. There would seem to be four major influences which it could conceivably exert, corresponding to the four channels through which an impetus can be exerted upon the multiplier. These four major channels are (*a*) home investment; (*b*) exports; (*c*) imports; and (*d*) Government deficits. We shall examine them in turn.

32. A stimulus to investment appears to demand two conditions: an improvement in confidence, and a lowering of the rate of interest, which is in turn bound up with an increase in the supply of money.

Now in the earlier years of the past depression public confidence was undermined by fears of collapse if the gold standard were abandoned. It needed, perhaps, the example of the successful "devaluation" of this country in 1931 to show that such fears were unfounded. For this reason it is conceivable that a devaluation at the beginning of some future slump might increase, rather than weaken, confidence. However, during 1930–32 devaluation conspicuously failed to engender that increase in confidence which was necessary to revive investment, or even to check its collapse.

In the face of this, and of the "economy campaigns" which were regarded as appropriate, there was no chance of an increase in the supply of money arising, nor of a fall in the bank rate seeping through to the long-term rate of interest, except in the gilt-edged market.

33. The possible influence of devaluation on exports is complicated by other factors: (*a*) the dominant element in 1930–32 was the acute fall in the aggregate value of world exports (Table 4). Merely to retain the same value in national currencies for an unchanged share in world trade would have involved an extremely heavy degree of devaluation. (*b*) In any case, devaluation is likely to turn the terms of trade (at least the factor terms) against a country, because its export prices will probably meet a more inelastic demand than its import prices. (*c*) This was accentuated in the case of most of the countries which devalued before 1933 by their being largely exporters of food or raw materials, the prices of which fell more steeply

than the average, because these products had low elasticities of supply and of demand—hence exports were difficult to stimulate by price-reductions, while every fall in price tended to become world-wide. (*d*) This difficulty was most acute in countries which depended chiefly upon one, or a narrow range, of exports; e.g., about one-third of the value of Australian exports in 1929–32 came from wool.

Further, (*e*) the markets in which countries devaluing before 1933 had to sell were still hit by deflation, except where (*f*) the buyer countries themselves had also devalued, thereby abolishing the seller country's competitive advantage, or (*g*) had adopted exchange control, which combined the disadvantages (to the seller) of deflating the buyer's purchasing power and lowering his effective exchange rate, and probably reinforced these by high tariffs.

Clearly, the more countries simultaneously devalued or controlled their exchanges, in order to secure competitive advantages in export markets, the less chance they had of doing so; and even if they succeeded, these advantages could only be secured by lowering world prices, which meant (*h*) that the price obtained in national currencies rose by less than the degree of devaluation.

Finally, a competitive advantage in export markets implied some degree of under-valuation of the currency. But during the period when stable currencies were being maintained, down to 1929, some had tended to become over-valued and some under-valued. Hence some countries entered upon currency adjustments with a relative advantage; others with a disadvantage. Those currencies which had been tending towards over-valuation gained less from devaluation than others. Primary-producing countries, being before 1930 largely capital-importing countries, were in a similar position, as soon as the flow of capital stopped.

34. An autonomous decrease in imports—the phrase is Mr. Colin Clark's[1]—implies one which arises from other causes than because of a change in the national income. Mr. Clark suggests that in Great Britain there was a considerable autonomous decrease in imports in 1931 and 1932, owing to the depreciated exchange and the imposition of tariffs. In general, however, it is difficult to separate such decreases from those due to a decline in the national income, and no very clear conclusion can be drawn from the available

---

[1] *Economic Journal*, September, 1938, p. 438.

evidence. Nevertheless, an examination of Table 2 shows that only in New Zealand and Denmark did imports fall materially further than did exports. It would seem therefore that only in these countries (among those there shewn) can changes in exports and imports, on balance, have produced a favourable impetus towards recovery. And even this is contingent upon the decline in imports being unconnected with the decline in the national income—which is at least improbable.

35. Finally we may consider changes in Government deficits. Two contradictory effects are here deducible from the evidence cited. On the one hand, the reduction in the rate of interest which followed devaluation may have stimulated Government borrowing. But on the other, the lowering of interest payments on old loans commonly reduced the total of Government disbursements and was therefore deflationary. In view of the widespread mistrust of unbalanced budgets, the latter was probably the more powerful influence. Further, if devaluation did help business in other ways, and so improved employment and tax-returns, this check to the multiplier must have been subsequently intensified (though perhaps by then desirably) by reductions in unemployment allowances, the cessation of public works and the resumption of sinking funds.

For the period 1930–32, therefore, it does not seem theoretically or practically possible that devaluation can have exerted any substantially favourable influence upon public finance. None of the four channels through which the multiplier can be activated was sensitive to it.

36. But for the period 1933–37 the situation was very different. The world trend was upward, and the inclusion, in 1933, of the United States in the list of devalued countries left the gold *bloc* in uncomfortable isolation. Their defences crumbled before the over-valuation which inevitably resulted, and one by one they were obliged to bring their currencies into line. For them, devaluation had no need to try to reverse a downward trend already established in each country and in the world as a whole; it had merely the simpler task of removing the depressing weight of an isolationist deflationary policy and allowing the internal economy to expand in conformity with those of the "paper" countries. The removal of the over-valuation of their currencies tended to restore confidence, and so investment; encouraged

exports without materially increasing imports; and being usually supported by judiciously inflationary Government policies, set the pace for recovery.

37. This is the explanation of the figures for Belgium already quoted (Table 8). Nevertheless, not all countries were similarly benefited. Belgium entered upon devaluation with the explicit aims of ending deflation, restoring profits to business, stimulating the domestic market, and relieving the banking crisis. Hence a rise in wholesale prices was desired, and a sufficient rate of devaluation was chosen (28 per cent.) which, by causing temporary under-valuation, would leave a margin for increasing prices without impairing again the competitive efficiency of Belgian exporters.

In Czechoslovakia, on the other hand, devaluation was desired in 1934 merely to eliminate the over-valuation of the koruna which was severely handicapping exports. The rate of devaluation chosen (16.7 per cent.) was regarded as just enough to restore a true external value to the currency; but wholesale prices could not thereafter be allowed to rise, lest competitive efficiency be once more impaired. Recovery in Czechoslovakia was therefore relatively slow, as was observed in paragraph 10 above. In fact, a second devaluation was found necessary upon the break-up of the gold *bloc* in 1936. It is needless to emphasise that the effect upon public finance in the two cases was very different.

38. These various considerations enable us to classify roughly the factors that need to be taken into account when considering the significance of devaluation to a single country, viz., whether it is:

(A.) Agricultural; semi-industrial; industrial.
(B.) Important consumer; unimportant consumer.
(C.) Dependent on international trade; relatively self-sufficient.
(D.) Dependent on one or few exports; having a range of exports.
(E.) Heavily devalued; moderately devalued; lightly devalued.

Other complications to be borne in mind are that devaluations may be undertaken:

(F.) At different times relative to seasonal fluctuations in the external demand for the currency.

(G.) For specific, and differing, objectives ; or
(H.) Following inflation, deflation, or stability in monetary management.

39. Over and above these points, however, two major contrasts may be emphasised. (i) It appears possible that devaluation may in general advantage a large country more than a small one. A large country will, for example, be more able to influence its import prices and so force down world prices, to its own benefit ; while at the same time it is likely to have a wider range of exports. Further, its relative strength will make it more attractive to fugitive foreign capital, so reducing its rate of interest ; while it is less likely to be a debtor abroad, thus avoiding increased interest charges on devaluation.

(ii) On the other hand, a country will clearly stand more chance of obtaining any available benefit from devaluation if it undertakes this alone or to a greater degree than others ; in so far as other countries—especially close competitors—devalue at the same moment or to the same extent, its chances of special individual advantage must necessarily be reduced.

40. And yet, important as these theoretical contrasts are, they are overshadowed by the cleavage, shown by the facts, between devaluations undertaken before and after the nadir of a slump. A full analysis, involving quantitative estimates of the factors involved, cannot be made on the data here presented. Furthermore, one can only infer what the position of any particular country might have been if it had not devalued when it did.[1] Yet, though largely negative, the evidence is strong enough to support two broad generalisations. Devaluation in the downward phase of a trade cycle is apparently incapable of releasing any one country from the general depressive trend. But once the bottom has been passed, devaluation may be necessary to enable advantage to be reaped of the upturn. A corollary might be that the direct effects of devaluation are bound to be relatively, and perhaps even absolutely, insignificant.

These conclusions, however, are necessarily tentative. For they are based on the experience of one trade cycle only, and in another the course of events might be different. And they are also based upon the universality of devaluation in the period reviewed ; for one country contemplating devaluation in a world of otherwise stable currencies neither part of our generalisation need be true.

---

[1] See para. 5 above.

BIBLIOGRAPHICAL NOTE :—

No individual references to other discussions of these problems have been made above. In so far, however, as recently published studies have reviewed Devaluations in the whole period since 1929, they would appear to be in general agreement with the conclusions here reached. See, for example, Braun : *Technik und Folgen der Devaluation* (1938) ; Wormser : *Déflation et Dévaluation* (1938) ; Gilbert : *Currency Depreciation* (1939). The more positive view taken by Professor Harris in *Exchange Depreciation* (1936), and by Professor Haberler in *Prosperity and Depression* (1938), appears to derive from concentrating only on the later years of the cycle.

The special problem discussed in para. 16 above has been attacked by Dr. J. J. Polak in the *Review of Economic Studies* (Feb., 1939), by methods of multiple correlation. While his results bear out the conclusions of this paper, his attempt to give them greater precision appears to be defeated by the inevitable uncertainty of his coefficients.

A Note on the Diagrammatic Representation of Elasticity of Supply

In the course of a geometric analysis of supply,[1] Mr. R. F. Fowler seeks to express the situation where " elasticity of supply is positive but less than unity " in terms of average and marginal supply price, marginal supply price being derived directly from the average. Whilst the conclusion reached is undisputed, the diagrams and analysis employed are open to the following criticism.

Mr. Fowler states that if the average supply price is reduced by a fixed amount per unit P_1P_2, so that the tangent (not the supply curve) cuts the X-axis positively at N, the marginal price *for the output OM* is also reduced by the same amount. But, mathematically, this is true for any output[2] and the diagram should accordingly show LC_2 (not NC_2) as the correspondent to the tangent. OL is then equal to C_1C_2, and the rest of the proof follows. (Figure 1.)

As a representation of economic quantities, however, the tangent is non-existent below Oq. If, therefore, it is redrawn as an average supply curve, its direction must be OTP, with a kink at T, and its correspondent, as a marginal supply curve, must be $OTNC$ with a discontinuity at T.[3] (Figure 2.)

R. C. Tress.

Mr. Fowler Replies

I am grateful to Mr. Tress for his correction. The line NC_2 (in my Figure 10) is not the correspondent to the tangent NP_2. I was concerned only to show that the ratio OD/DL, which measures on the Y-axis the elasticity of supply, is equal to the ratio MP/CP for a *given* output of X. This relationship will then be true for any other output of X. My proof did not, therefore, require the use of the line NC_2 which I should not have drawn. I agree with Mr. Tress that, as a *supply curve*, the tangent is non-existent below Oq and will have a kink at T. As Mr. Tress points out, the tangent NP_2 was erroneously described as a supply curve.

R. F. Fowler.

---

[1] R. F. Fowler, "The Diagrammatic Representation of Elasticity of Supply," Economica, May, 1938.

[2] Let T, A and M be the total, average and marginal supply prices respectively for a variable output x, such that $A=f(x)$. Then, $T=xf(x)$ and $M=f(x)+xf'(x)$. Now reduce the average supply price by a fixed amount per unit, c, such that the new total, average and marginal supply prices are respectively t, a and m. Then, $a=f(x)+c$, $t=xf(x)+cx$, and m $=\frac{dt}{dx}=f(x)+xf'(x)+c=M+c$.

[3] Cf. J. Robinson, *Economics of Imperfect Competition*, p. 37.

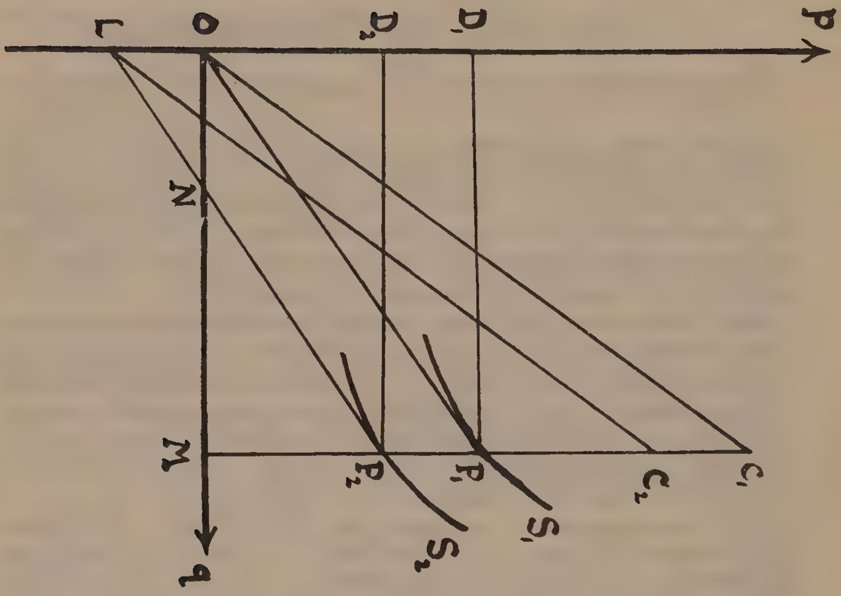


Figure 1

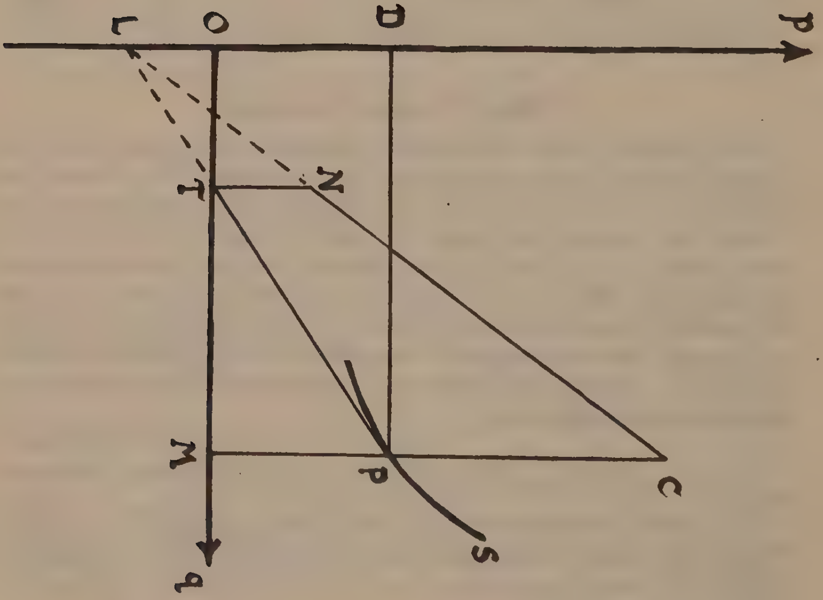


Figure 2

Book Reviews

The Finance of British Government 1920–1936. By Ursula K. Hicks. London: Humphrey Milford. 1938. 391 pp. 15s.

This is the comprehensive study of British public finance since the war which has been badly needed. Mrs. Hicks has performed her task in an admirable and scholarly manner. The statistical and other material is well chosen and well presented; her criticisms are acute and are based on a thorough examination of the facts; and, above all, she treats public finance not as something apart from the rest of the economy but as a leading influence, both in itself and in its relations to monetary policy, on the whole economic and social situation.

About a third of the national income now passes through the hands of central and local authorities. Mrs. Hicks shows how the central government has come to bear a larger share of the cost of activities which used to be "local" and advocates still further progress in this direction—in particular, more expenditure on roads by the central government—and some groupings of local authorities into larger units. She shows, too, the increasing activity of the State in assisting particular industries. Much of this, of course, takes place outside the budget and makes attempts to measure the "burden" of taxation somewhat inadequate. She believes in separating "capital" and "current" expenditure and in regulating the timing of public investment to offset, at least in part, fluctuations in private investment. In fact, "throughout the period, so far as public investment is influential in the trade cycle, its weight has been thrown into the balance on the wrong side". She favours budget deficits in appropriate circumstances but insists that "in the longer period the budget *must* balance. Uncontrolled recourse to borrowing is obviously contrary to any principles of sound finance". And she regards the growth of the debt with some apprehension, declaring that a larger share of the cost of the war should have been met out of taxation. It is a little surprising, and to my mind reassuring, to find that a modern economist still holds such old-fashioned views.

There are one or two minor points on which I cannot quite agree. The housing boom during the recovery period was due, in my view, more to the increase in real incomes (arising largely from the low prices of imported food) than to the fall in building costs. Again Mrs. Hicks denies that there was any serious continued pressure on sterling from 1925 to 1929, but in fact sterling was below mint parity, and Great Britain was tending to lose gold, throughout this period. Mrs. Hicks points out that income tax discourages risk-taking but does not suggest any means—such as a tax on idle balances—of lessening this effect. Nor does she trace the successive measures which have been taken to prevent evasion of income-tax and surtax. But one can feel nothing but gratitude for her work as a whole.

FREDERIC BENHAM.

State Population Census by Faiths: Meaning, Reliability and Value. By H. S. LINFIELD. Hasid's Bibliographic and Library Service. New York. 1938. 72 pp. $2.00.

The purpose of this study by the director of the Jewish Statistical Bureau in New York is to summarise the experiences gained by the countries that have ascertained the faiths of the inhabitants in connection with general censuses. It discusses the present extent of the state population census by faiths; the nature of the question on religion in the census schedule; the summation of the census returns; the utilisation of the census results by state authorities and by church bodies; and finally, the meaning of the state population census by faiths, its reliability and value. The survey covers every independent country and every colony or dependency which in its last population census sought to determine the religious affiliations of its inhabitants.

Of the principal powers of the world only Germany and Italy enumerate their respective populations by faiths. The religious affiliation is not ascertained, for example, in Great Britain, France (except Alsace-Lorraine), Soviet Russia, the United States of America, Brazil and Argentine. In the countries where a census by faiths is taken, little use of the results is made, as a rule, for practical purposes. "On the whole, government offices and church leaders in their communications to the writer on this question agree that neither national or local government departments nor church bodies utilise the religious population census data in their respective fields of work."

It cannot be denied, nevertheless, that the scientific value of such statistics is great. Dr. Linfield himself, it is true, is sceptical as regards the trustworthiness of the census returns for many countries. "The fact that in the Protestant provinces of the Netherlands 171 persons of every 1,000 are returned Atheist, while only 11 persons are so returned in the Catholic provinces of that country can be understood only in one way: the question on religion means one thing to the inhabitants of some provinces and another to those of other provinces . . . . The question on religion in the population census evidently meant to Dutch Protestants religious conviction or church membership, more or less; while in the case of the Catholic population, the question signified identification with a social group as Catholic over against that known as Protestant, and hence the result of the process of secularisation could not come to light. The census results of the religious distribution of that country are thus misleading and false." I do not think that this conclusion is justified. It may very well be that only comparatively few Catholics in the Netherlands have become atheists, and this seems the more likely as the Catholics live mostly in the rural districts.

The Appendices showing the text of the question on religion in the census questionnaires, the types of statistical analyses used in summing up the census returns, and the religions or churches returned in the latest population censuses greatly enhance the value of this useful monograph.

R. R. Kuczynski.

International Monetary Economics. By Michael A. Heilperin. Longmans. 1939. xiv + 281 pp. 15s.

Professor Heilperin has a double objective. On the one hand he sets out to clarify the economic concepts within his field; on the other to develop the thesis that "the mechanism of re-establishing equilibrium in international payments must work through the application of essentially the same instruments of action whatever the monetary system adopted".

His early chapters are accordingly exegetical. The simplified relationships between gold and prices postulated by Professors Cassel and Rist are successfully demolished, and the author's guns are then turned against the theoretical bases of exchange rates. Unfortunately, however, the destruction in turn of the "Balance of Payments," the "Purchasing Power Parity" and the "Psychological" explanations leads him to an *impasse*: "There is no *a priori* rate of exchange which can be considered as representing the normal or natural parity between . . . currencies, for there is no legitimate way of calculating such a rate on the basis of the various economic data" (p. 140). This "fundamental and inescapable conclusion" is strongly stressed, but it is surely unduly pessimistic. Even if we cannot at present solve the practical problem, must we deny that it has any possible solution? May we not rather hope that the inductive enquiries, by which the author elsewhere sets great store, will illuminate in due course this admittedly dark corner?

The second part of the book is concerned with the essential unity of all forms of international "re-equilibrium". The mechanisms involved are divided into two types: "Automatic" adjustments comprise the direct transfer of coins between all-metal currencies, plus shifts of demand schedules of the Ricardo-Ohlin type. "Induced" adjustments consist of price changes and capital movements. From these elements there is constructed a "General Theory of Re-Equilibrium in International Payments" (pp. 123, 159 ff) which consists essentially of a synthesis of the various possible corrective movements within the Balance of Payments, emphasising the need to "induce" alterations of the second class (especially capital transfers) by appropriate monetary policies.

There is unhappily some lack of subtlety in the treatment here. The assumption is made that "Price movements which enter into a process of adjustment of international payments are not likely to be of an amplitude which would seriously disturb economic activity and amount to a deflation (or inflation)" (p. 169). From this it naturally follows that there is no essential difference between the aims of a gold standard and of free exchanges. But the crucial question is, of course, less whether internal price changes need be large than whether they can be secured readily and without strain; and this is not discussed.

It is, therefore, with considerable reserve that we receive Professor Heilperin's later criticisms of independent currencies. He has a healthy respect for the Trade Cycle as a potent disruptor of international equilibria, but this is inclined to lead him into assuming that cyclical fluctuations are the only begetters of autonomous monetary policies. In a world where under-employment is endemic and economic palliatives sporadic, this seems too hopeful a view. His encomiums of fixed parities seem rather backward—than forward—looking, and we are left feeling that the last word has not yet been said for the policies which he decries.

This is a discursive book, and its positive contribution to current thought is not easy to disentangle. It appears also to be the first of a trilogy, and as such is difficult to appraise. But a sharper edge to his tools would, we feel, have enabled Professor Heilperin to tackle more convincingly the interesting problems he has faced.

J. K. HORSEFIELD.

Currency Depreciation. By MILTON GILBERT. Philadelphia: University of Pennsylvania Press. London: Oxford University Press. 1939. xiii + 166 pp. 9s.

Technik und Folgen der Devaluation. By GERHARD W. BRAUN. Bühl-Baden: Konkordia. 1938. viii + 271 pp.

The currency devaluations of 1930–36 have by now receded sufficiently through time for good progress to be made in evaluating their significance. As was to be expected, the more extreme anticipations have not been fulfilled. Devaluation is neither an inflationary (or deflationary) poison, nor a reflationary panacea. But as to what it actually does involve, interesting problems still remain. Must any future international standard include provision for periodical revaluations ? Can devaluation end, or does it inevitably begin, a period of progressive readjustment ? Can conditions for its safe and successful adoption be inductively ascertained ? It is to questions such as these that recent writers on currency depreciation have addressed themselves, and while neither of the books now before us ventures any detailed argument on the first topic, they both, in different ways, contribute to the second and third.

Mr. Gilbert's attractive and lucid analysis is founded on the scattered studies, chiefly American, which have recently been made on different aspects of the problem. He traces in a continuous narrative the causes and effects of devaluation in Australia, Great Britain, Sweden and the United States, and is mainly concerned to shew that it was unavoidable and beneficial in the first three cases, but neither the one nor the other in America. The argument centres round an enquiry into the alleged deflationary effect of the depreciation of sterling. From this impeachment the accused is acquitted, on a verdict which hovers between Non Proven and Not Guilty—only, however, to be convicted instead on an alternative charge (pp. 103, 161) of causing a public mischief by delaying until 1931 a devaluation which should have been effected in 1928.

Mr. Gilbert makes his points neatly and concisely, though there will be inevitable disagreement on points of emphasis and detail, and certain assumptions appear rather precarious. Is it, for example, safe to rely upon the elasticity of demand for imports remaining unchanged if the national income falls nearly 50 per cent. ? (pp. 13, 19). We could also wish to see resolved the discrepancy between page 32, which speaks of depreciated currencies finding their own level after a reflationary process, and page 156, which warns us that the degree of depreciation must be decided in advance lest speculators break in and steal the equilibrium which is sought. As it is, the problem of forecasting the appropriate degree of devaluation remains unilluminated. Two other obscurities are due to misprints. An important argument on page 67 goes awry because a line is interposed from page 65 ; and on pp. 59–61, and in Table 22, thousands of pounds sterling are quoted where millions are meant.

Dr. Braun is evidently less conversant with recent literature in English on the subject. His bibliography includes scarcely any specialised references, and does not quote, for example, Professor Harris's monumental *Exchange Depreciation*, which covers something of the same statistical ground. Interesting as his tables are, therefore, a good deal in them will be already familiar to English readers. However, Dr. Braun does not confine himself to inductive studies. Efforts are made at successive stages to tabulate the conclusions which emerge and to relate them to an analytical framework. This is based on a differentiation of function, devaluations undertaken in the interests of exports being distinguished from those with a business-cycle objective. A careful classification is also made of the credit and commercial policies necessary to implement the potential benefits to be derived from devaluation in each case.

Unfortunately, though great pains are taken with the documentation, it is only a mouse which emerges when the labour is done. The secret of success in devaluation appears to be, firstly to undertake it at the right time and with the right propaganda ; and secondly to support it energetically by open-market operations and public works. This is surely to err needlessly on the side of caution. Despite the thorny problems involved, more positive advice than this can now be given on the questions " When ? " and " By how much ? " which every prospective devaluer seeks to have answered.

However, in the last chapter of his book Dr. Braun casts his doubts aside and advocates energetically the immediate devaluation of the mark. Whatever may have been the position before 1933, he believes that the depreciation of the dollar removed the last justification for the old mark parity. As a result of maintaining it still, Germany now has the highest gold price-level in the world, yet mark prices for many exports stand at unremunerative levels. Dr. Braun claims that the stabilisation of the mark at its present level is the greatest existing obstacle to the expansion of German exports, and that the arguments for shunning devaluation are without foundation. He contends that the main hope for Germany's four-year plan lies in abandoning the barren peak on which the mark now dwells in solitary state, and meeting the devalued currencies on their own ground below. For the sake of world peace it is to be hoped that Dr. Funk will read and digest these pages.

J. K. HORSEFIELD.

Common Stock Prices, 1871–1937. By ALFRED COWLES 3RD and Associates. Cowles Commission for Research in Economics, Monograph No. 3. Principia Press, Bloomington, Indiana. 1938. Price $6.

This 500 page (royal octavo) work contains about 400 pages devoted to tables and charts of monthly and annual index numbers of common stocks in U.S.A., those for *All Stocks* and for the major subdivisions covering the period 1871 to 1937. In all, seven series are given in respect of each of 69 groups or sub-groups, 30 of these commencing not later than 1901. The seven types of index-numbers measure :—

(1) Stock Prices (Monthly and Annual).
(2) Stock Prices including Cash Dividends (Monthly and Annual).
(3) Yield Expectations (Monthly and Annual).
(4) Yields (Annual).

(5) Dividend Payments (Annual).
(6) Earnings, Price Ratios (Annual).
(7) Earnings (Annual).

The authors have co-operated with the Standard Statistics Company, whose figures are utilised for some of the series after 1918 and whose current figures can be used for keeping the Cowles Commission Series up to date.

"*The index-numbers of stock prices are intended to represent (ignoring brokerage, etc., and taxation) what would have happened to an investor's funds if he had bought at the beginning of* 1871 *all stocks quoted on the New York Stock Exchange, allocating his purchases among the individual issues in proportion to their total monetary value, and each month up to* 1937 *had by the same criterion redistributed his holdings among all quoted stocks*." In other words, the series are calculated on the chain base system, the links being the averages of the month-to-month percentage changes in market prices weighted by the market value of shares outstanding in each case.

From the definition quoted above, it will be realised that the number of companies included is considerable! The list occupies 19 pages in double columns! Though for practical purposes general index numbers based upon a selection of 50–100, or even less, representative shares are usually adequate, there is little doubt as to the value, for purposes of reference, of the comprehensive records which have been compiled by the Commission, more especially of the subsidiary index numbers relating to individual industries, etc.

The book contains some discussion on the divergence between the movements of published U.S.A. security index-numbers and indicates the absence of essential adjustments in the data used in the calculation of some of them. But there seems to be no reference to the fact that, if methods of calculation and weighting are appropriately chosen, security index numbers may be compiled to measure other aspects of stock exchange movements besides that of investment. The Cowles' series are clearly investment index numbers.

As anticipated by the authors, the use of means of highest and lowest prices as approximations to the monthly averages (to avoid a prohibitive amount of labour) is a matter for criticism; some distortion in monthly indexes might arise from this method, though the annual averages are unlikely to be affected.

The book is well printed; the tables are clear and well spaced for easy reference. The charts are drawn on logarithmic scales, ensuring proportionate comparison of movements during the 67 years covered.

A most useful section is Appendix I, which contains summary descriptions of the chief common stock index-numbers of the United States and of 21 other countries, with sources.

K. C. SMITH.

Some Australians Take Stock. Edited by J. C. G. Kevin. Longmans, Green & Co. ix + 241 pp. 10s. 6d.

At first sight, this volume may seem to contain a rather odd assortment of essays,[1] but an Australian abroad recognises that the subjects covered, although not all related, are those in which non-Australians appear to be most interested. Those who are familiar with Australian general and economic literature, or even have read only Professor W. K. Hancock's book on Australia, will find few " new " facts in these essays. Such persons, however, are rare and this enhances the value of the book. The Editor, in his preface, says that he hopes that the opinions expressed will be useful to " those many people in this country who are genuinely anxious to appreciate the Australian point of view," and it is only necessary to qualify this slightly by saying that on many important matters there is no single, or even predominant, Australian point of view, and that several of the contributors are evangelists for their own intelligible, but not necessarily " the Australian ", point of view.

An excellent opening chapter by an anthropologist fervently advocates steps which should be taken to launch the Australian Aborigines " on the strange and unpredictable path of a primitive people preserved to some end which at the moment is clear to very few ". The second chapter, as its title " Botany Bay " clearly suggests, deals with the period of " convictism " ; it clearly shows the limited effect which this had on Australia's development. The characteristics of Australian speech are discussed in the chapter on " Accent ", wherein the writer suggests that the Australian dialect has immense possibilities for vigorous growth. The author of the chapter on " Foreign Policy ", who has ably edited the book, makes a plea for a more enterprising Australian foreign policy, based apparently upon his sincere belief in the early phase of the " Chamberlain Policy ". He sets forth many wise suggestions for encouraging a better Australian appreciation of foreign affairs and for the improvement of Australian diplomatic representation abroad. Another writer gives reasons why Australia's more ambitious sons seek careers abroad, in a chapter entitled the " Export of Talent ". An excellent summary of the history and platforms of the political parties is given in the chapter on " Politics ", but the author, in his endeavour to show how the federal constitution has thwarted the efforts of the Labour Party to gain power and how it precludes the application of a socialist, as distinct from a reformist, programme, overstates his case.

The economist will be interested in his references to the federal constitution, and even in this inadequate review of the " non-economic " chapters of the book some reference must be made to the statement that the Australian Loan Council works in such a way that " a State Government has no real control even in those fields which are entrusted to it and, of course, in such a case the Federal Parliament has no power ". The Loan Council has really done a great deal to harmonise federal financial relations. There are difficulties, it is true, in determining the correct proportion which each of the seven governments of the federation should receive from the limited loan moneys available. But, even though there is scope for scientific-cum-political investigation into this matter, and for long-range development planning, the formula by which, when the Council is not unanimous, the loan programme is allotted (one-fifth of the total for the Commonwealth Government and the remainder divided among the States according to the amount allotted to each State during the five previous years) is, with all its limitations, at least a viable arrangement.

---

[1] " The Aborigines " (Dr. W. E. H. Stanner) ; " Botany Bay " (L. R. McIntyre) ; " Blanks on the Map " (Dr. I. Clunies Ross) ; " Accent " (T. S. Dorsch) ; " Politics " (R. W. G. Mackay) ; " Japan or Manchester ? " (Dr. F. C. Benham—an " adopted " Australian) ; " The Export of Talent " (J. V. Connolly) ; " Foreign Policy " (J. C. G. Kevin) ; " Migration " (Professor A. G. B. Fisher).

The chapters of a primarily economic nature are to a large extent interlocking and in the main they expound what has come to be regarded by economists in Australia as sound doctrine. " Blanks on the Map " describes with the aid of useful maps the climatic and geographic controls of settlement and explains that 2,000,000 square miles of Australia are " destined to carry only a very slight population to the end of time " and that while the remaining 31 per cent. of the country can provide a great increase in agricultural production, the degree and rate of increase depends on the economic factors and conditions of international trade. Australia's international trade problem is considered in the chapter " Japan or Manchester ? ". Consideration of probable changes in the British population, standards of living and agricultural policy leads to the conclusion that Australia's biggest market for primary products (Great Britain) " is more likely to contract than to expand in the future ". A clear and searching analysis of the consequences for Australia of the Ottawa policy suggests that " in the long run " it would be to Australia's advantage if " international trade were promoted by scrapping or modifying the Ottawa system ". In support of this contention it is pointed out that Australia gets no preferences in the British market on her wool and gold, and that the preferences on her wheat, lead and zinc do not amount to much. Even if British preferences were taken away from her butter, meat, etc., she would still sell some of these commodities to Britain, while the portion of such trade that she would lose would be the least profitable part ; the Australian consumer subsidises the British consumer's purchases of butter, sugar, raisins and currants ! The writer stresses the potential importance of the Japanese market, which before the Sino-Japanese war, was Australia's second best export field.

The suggestion that Australia should more carefully explore the potential markets of depressed living standard countries, such as in Asia, is also made in the scholarly chapter on " Migration ", which concludes the book. Two limiting factors, however, are mentioned. The improvements in habits of food and clothing which are needed in the depressed living standard countries are likely to be associated with improvements in local agricultural technique, and there are difficulties in getting a changed Australian outlook towards imports from low-wage countries.

The writer on Migration explains that the recent reversal of the old stream of migration from Great Britain is due to the fact, not that Britons are kept out of Australia, but that they no longer want to go in. This is partly explained by the improvement in the position of the average man in Great Britain—not by a fall in economic standards in Australia—and partly by the fact that there is no longer the urgent world demand for expansion in the output of those goods which Australia is best fitted to produce. The author considers the Australian industrial structure will become more diversified " irrespective of the vagaries of tariff policy," but that those who believe that this necessitates inducing further large-scale migration are too much " influenced by the static habit of mind ". Even on grounds of defence it can scarcely be urged seriously, he says, that a population, for example, of 9 millions will be much more effective than a population of 7 millions. The fact that the largest net migration into Australia in a single quinquennium was 224,000 in 1881–5, when there was rapid economic expansion, suggests that by the time the arbitrary figure of 9 millions is reached Australia's fate will be long decided. Despite the dominantly British character of the Australian population he feels that the contributions made by non-Britishers to Australian development have not always been recognised, and he doubts the advantages of a completely homogeneous population. In his view a generous attitude towards the entrance of refugees would be in accordance not only with the dictates of humanitarianism, but also with Australia's economic interests.

In this chapter the author also points out that the proportion of the total population employed in such work as art, literature, science and so on, " which are the real test of the growth of civilisation," is larger than it was, but that the most suitable environment for another large fraction of these services is to be found in highly developed countries where population is already dense. This is one reason for the reversal in recent years of the flow of migrants from Great Britain, some of the personal reasons for which are suggested in the earlier chapter entitled " The Export of Talent ". The powers of self-analysis and criticism, as well as of exposition, which are displayed in this book may suggest the benefits to Australians, if not to Australia, of the " export of talent "—for the contributors themselves are either permanently or temporarily absent from Australia—but it is probably not too much to regard its authors as exhibiting signs of Australia's progress to mental maturity.

H. R. RANDERSON.

Marketing of Raw Cotton in India. By M. L. Dantwala. Longmans, Green. 1937. Rs. 6. 260 pp.

Mr. Dantwala has contributed a particularly interesting and valuable volume to the Bombay Series of *Studies in Indian Economics.* Ever since the Royal Commission on Agriculture in India emphasised the urgent need for improvements in the marketing and finance of staple Indian crops, this subject has attracted widespread attention. The reports of the Provincial Banking Committee, issued a few years later, also devoted much space to a description of existing methods and the need for better agricultural credit facilities. As a result the Government of India appointed an Agricultural Marketing Adviser, in 1935, with a central staff of 18 officers, and by the end of the year no less than 92 full-time officers and 223 assistants had been appointed in the Provinces. A number of preliminary local surveys have already been made, and a valuable central report on wheat has already been issued.

But this method of approach takes time, whilst the need for a clearer understanding of the problems involved and for the initiation of reforms is urgent, particularly as the requisite reforms call for action by traders and trading associations, as well as by the Government. A warm welcome should, therefore, be accorded to Mr. Dantwala's attempt to fill the gap in the case of India's largest money crop, i.e., cotton.

The present study is the first systematic attempt to study the marketing and finance of raw cotton from the peasant's holding until its final sale either in India or for export. Previous studies have never attempted a complete picture. The Royal Commission on Agriculture, for instance, ignored the whole series of problems which centre round the Bombay "Futures" Market. Bills, designed to reform the present unsatisfactory state of affairs, were introduced in 1930 and 1931, it is true, but these were defeated, and no solution has yet been found for the thorny problems involved. Great ignorance prevails, except amongst those actually engaged in "Futures" dealing, even with regard to the actual methods employed, whilst there is urgent need for scientific study and serious discussion of the whole subject. Mr. Dantwala reveals a sound grasp of the theoretical and practical aspects of this question, and presents a penetrating analysis of the main problems involved. No such account has hitherto been available for the student and general reader. It may, for instance, be asked how many even of those who refer glibly to "organised trading in cotton in Bombay" realise that although there are no less than five separate forms of recognised "futures" contracts in Bombay, only some two million bales, out of a total annual production of five to six million, of Indian cotton are tenderable against these contracts? From this fact alone, and from the alarming prevalence of unregulated gambling in cotton, of which Mr. Dantwala gives ample evidence, it is obvious that the existing system fails to provide adequate machinery for risk-bearing and risk-sharing, and gives rise to overwhelming opportunities for undue speculation.

Mr. Dantwala also throws considerable light on the part played by middlemen and the results of their activities. It has been customary to condemn Indian middlemen as predominantly " sharks," who earn undue profits at the expense of ignorant and " weak " producers, and prevent the latter from obtaining a fair price for their products. Mr. Dantwala does not, of course, deny the weak position of the peasants. He urges that orderly marketing would help to break the present vicious circle, whereby small returns lead to inefficient production, and inefficient production entails small returns. But he does show not only that the middlemen perform essential services which could not under existing circumstances be performed by the peasants themselves, but also that they do not by any means always secure high profits. On the contrary competition is so keen that over a considerable period the price obtained for cotton in small, up-country markets was actually continuously above the parity price prevailing in Bombay.

Mr. Dantwala is less reliable in his references to the course of events and policies pursued outside India. For instance, his account of the A.A.A. is somewhat uncritical and misleading, and he refers to the " success of the A.A.A.," as shown by the rise in cotton prices between 1932 and 1935, without even mentioning the harvest failures of 1934 and 1935.

In a future edition the value of this study would be greatly enhanced by the inclusion of an account of recent developments in marketing organisation and " futures " dealings in a number of central markets in the interior. This subject is entirely ignored, and, indeed, the reader is left with the erroneous impression that " futures " dealings are at present conducted only in Bombay. It may also be suggested that the author's plea for the extension of co-operative marketing would be greatly strengthened by a comparison of the costs of marketing by co-operative and non-co-operative methods.

VERA ANSTEY.

France Faces Depopulation. By J. J. SPENGLER. Duke University Press, North Carolina. 1938. xi + 313 pp. $3.00.

In 1930 Professor Spengler produced the standard study of the comparative fertilities of native and foreign born women in New England. Since then, in spite of the pressure of other work, he has found time to make many further contributions, especially in the field of population theory and policies. Two in particular, " French population theory since 1800 " (*J. P. E.*, October and December, 1936), and " Birth prevention in France " (*Marriage Hygiene*, May and August, 1936), which are examples of penetrating research, may be regarded as interim reports on the subject which has long occupied first place in his interest—population movements and policies in France. And now, in the book cited at the head of this review, we are fortunate enough to have the results of Professor Spengler's meticulous examination of the subject.

The book falls broadly into three parts. The first discusses the actual growth of the French population from 1700 to the present day, and contains a careful analysis of the validity ot the pre-census estimates. It also presents what is known about differential fertility in France, understanding by this term both regional and class differences. The second part focusses on the innumerable expressions of concern at threatened depopulation which have been heard in France since the fifteenth century, and on the manifold explanations which have been given for the decline in French fertility. The remainder of the book is concerned mainly with the translation of population theory into practice, the results on fertility and migration, and with a final consideration of the general bases of population policy and the contradictions in the French system.

An outline of the general conclusions would take the following shape: At all times concern has been expressed at the low rate of growth of the French population, or at the likelihood of a future fall in numbers. In the mercantilist period this concern arose from assuming an inevitable correlation between numbers and prosperity, and this belief is still prominent. But fear of invasion and of defeat in the event of war are now much more important factors, and it is doubtful if the welfare of the average man is seriously considered in deciding upon the desirability of promoting population growth. It is important to note, however, that pro-natalist propaganda is largely left to unofficial bodies, such as the *Alliance Nationale* and the *Fédération des Familles Nombreuses*, though the unofficial bodies are represented on the *Conseil Supérieur de la Natalité*, which is attached to the Ministry of Health. But in spite of the endless propaganda, relatively little is spent to improve the economic conditions of families in general, though the various pro-natalist associations are continually urging increased financial help. It is true that there is a widespread family allowance system, legally obligatory, and supported almost entirely by levies on private employers. But the allowances are generally small in relation to basic earnings. There is also a system of taxation exemptions and rebates, reduced fares, assistance in house purchase and construction, and social insurance measures. But taken as a whole, the expenditure on family encouragement is very much less (one-third in 1936–7, according to Professor Spengler) than the amount spent on military and air defence, though population measures are being increasingly regarded from the point of view of defence. It is not, therefore, surprising that fertility is still declining in France. The net reproduction rate for the whole country has fallen from 0.930 in 1930–32 to 0.880 in 1936, and in 1936 fifty-one of the ninety *Départements* had rates below unity (see data by P. Depoid in *Revue de* *l'Alliance Nationale*, October, 1938, and in *Population*, August, 1938). Fertility is higher in France than in this country, but it is nevertheless still declining, and the population measures cannot have done more than slow down the rate of decline.

But this is merely a bare indication of a part of the vast collection of material contained in the book. Professor Spengler has in fact read practically everything that has been written on the subject, by Frenchmen and others, and this is particularly impressive because more has been written about French population movements and policies than on comparable problems in any other country. Nor is it just a matter of reading. The facts collected and views expressed by different writers have been carefully weighed and synthesised, and discussed in relation to the economic and social framework of the country. There is no comparable study by any other author, either for France or for any other country, and *France Faces Depopulation* will immediately become the standard work on the subject. The present reviewer wishes to record his appreciation of what he must regard as the finest single contribution to demographic sociology it has been his privilege to read.

D. V. GLASS.

The National Income of Hungary, 1924-5—1936-7. By MATTHIAS MATOLCSY and STEPHEN VARGA. P. S. King and Son. 1938. viii + 116 pp. 15s.

The National Income of Australia. By COLIN CLARK and J. G. CRAWFORD. Angus & Robertson. 1938. viii + 111 pp. 3s. 6d.

The Hungarian inquiry works on a definition of the national income which is similar to that used by Colin Clark in his *The National Income, 1924–31*, which is quoted with approval. Apparently at the time the Hungarian work was written Clark's later definition, appearing in *National Income and Outlay*, was not available. In these circumstances it is interesting that Clark's earlier definition is rejected when it says: "Where taxation is levied upon particular commodities and services, such as the customs and excise duties on commodities or the entertainment tax, such taxes are not included in the selling value." It is argued that indirect taxes raise prices and hence the nominal national income, but that when the nominal income is adjusted by a price index it is shown that real income has not increased. This is the conclusion that Clark came to in *National Income and Outlay*.

Messrs. Matolcsy and Varga keep consistently in mind the necessity of correcting money values for changes in the value of money. Their statement that "the amount of the national income has no meaning except in connection with the price level" would probably not find universal acceptance, especially amongst economists interested in monetary theory and the trade cycle. Nevertheless this predominant aim makes for a certain clarity, and with only this aim in mind one agrees with the decision to include indirect taxes in the national income, whereby the national income is increased if the Government changes over from direct to indirect taxation.

The other disagreement with Clark is of a more controversial nature; it might partly be due to the fact that a single definition is not necessarily suitable for all countries, especially where the activities of the governments differ. Clark includes services provided freely by the state at cost, the Hungarian study excludes all expenditure by the state, when that expenditure is of taxation. Theoretically certain expenditure by the state should be included, they argue, but such expenditure is small and often eludes statistical approach. An example is expenditure incurred for public concerts and shows, whilst certain subjective values would be included if it were possible, such as " the intense pleasure derived from a visit to a picture gallery —which the entrance fee does by no means measure." One is surprised at the desire to measure consumers' surplus, and at a personal expression of opinion as to the value of art galleries in an objective book.

But why, in general, should government expenditure of taxation be excluded ? Because services provided freely by the state are rarely additions to the national income, they only ensure the maintenance of the present level of production. It is not a question of the productivity of the civil service, public administration is certainly productive, but the value has already been included in the value of the goods and services available for consumption. The argument sounds good, but the example is not convincing. This example is education, which is a cost of maintaining capital intact. A proportion of educated persons dies each year, and the cost of education is predominantly a cost of replacing the knowledge lost. If there is a net increase in knowledge each year, and if that increase could be measured, that increase only should be counted as income. But why stop with education ? Is not the whole cost of rearing children necessary to replace people growing old ? Is not much of the food and clothing consumed by adults necessary to maintain the labour force ? If the argument is carried to its logical conclusion we discover that much of what is normally considered to be national income is simply a depreciation charge on human capital. Probably it is better to adopt the convention that individuals are not capital.

This exclusion of government expenditure from the national income means that the sum of individual incomes exceeds the national income, for schoolmasters and civil servants have incomes, yet their services are not reckoned in national income. Apparently expenditure of the government on materials is counted in the national income, being part of the output of industry. Excluding the value of unpaid domestic work, the following are figures for 1936-7:—

Total of individual incomes	4,556.2 million pengös
National income	4,227.5 million pengös
Production of material goods	3,983.5 million pengös

An estimate made of the value of services rendered by wives is interesting. It is assumed that married women work half-time in doing domestic work if they have no other occupation. In towns this work is valued at the rate applicable to domestic servants, in the country at half the rate paid to female labourers in agriculture, for only the weaker women do housework.

The base years for the price index and volume of the national income are the three years 1924-5 to 1926-7. The first of these years does not seem a suitable year to take, for the income both in volume and value was then much lower than in the two following years. The volume per head of the national income was 104 between 1925-6 and 1927-8, rose to 110 in the following year, fell to 94 in the depression and rose to a record figure of 120 in 1936-7. The nominal value in 1936-7 was still considerably below the peak.

The Australian study is apparently intended for more popular reading than the Hungarian one. It includes not only estimates of the national income of Australia, but a chapter of advice on how Australia should be governed, and hints that bankers should abandon their traditional views. The advice offered is the now common one of providing public works to find an outlet for savings and offset the slump. The Australian only spends 52 per cent. of any increased income on home produced consumption goods and services, and saves 23 per cent., the remainder being used to purchase imports. Outlets for the savings could be found in opening up new parts of the continent and in forestry, both expenditures which are almost certain to be remunerative; but most attention is given to housing. Britain with scarcely seven times the population of Australia has in recent years been building fifteen times as many houses. There is plenty of room in Australia for more houses, and though building costs will have to be reduced before building expansion becomes economic, this must not be allowed to obscure the still more important need of low interest rates.

The basic concept of national income statistics is said to be gross national income produced, which is the value of all finished goods and services produced, together with semi-finished commodities which are exported or which form net additions to stocks. The principle object of the calculations in the book, however, is net national income produced, which is defined as gross national income minus depreciation and indirect taxation. Mr. Clark has not reverted completely to his first definition, he has simply decided that each of his definitions is appropriate for particular purposes. The main statistics exclude indirect taxation, but when comparisons of real income between years have to be made, then indirect taxation is included.

The difficulty of adding incomes received in Australia is that less than one person in ten of the occupied population is a payer of income tax, the effective exemption limit since 1930 being £325. In 1933-4

65 per cent. of the estimated income went to non-taxpayers. Other information of the distribution of income is meagre. When in the census of 1933 Australians were asked to state to which of six income classes they belonged they apparently made statements on the low side. The only information was some figures, hitherto unpublished, collected by Mr. S. T. Carver of all wage and salary incomes earned in New South Wales in a week in July, 1933, and a study also for New South Wales including unearned incomes in 1920-21. We are not told how Mr. Carver obtained his figures. It is assumed that the New South Wales distribution is applicable to all Australia.

In other respects great faith is shown in the universality of economic conditions. After quoting experience in the United States an addition is made to the national income to compensate for the writing down of stocks of unchanged quality and quantity when prices fell. An approximate estimate of trading losses is made on the basis of British figures. When the income method shows a national income about 5 per cent. lower than the production method it is pointed out that evasion of income tax in Britain possibly amounts to 5 per cent. of the whole national income.

An attempt is made to compare the real income per person employed from about 1890 to the present day, assuming throughout that work was on the present basis of 45 hours per week. From 1890 to 1920 inclusive the figure remained close to £210 per year on the basis of prices as they were between 1923 and 1927, then it rose rapidly to £300 per occupied person in 1924-5 and £350 per person in 1932-3.

H. S. Booker.

Public and Private Property in Great Britain. By H. Campion. Oxford University Press in Great Britain. 1939. xvii + 137 pp. 8s. 6d.

Mr. Campion has two predominant aims in his book. One is to measure public and private property before 1914 and at selected dates since to compare the importance of each and changes in their relationship. The other aim is to measure and compare the distribution of property in private hands at the various dates.

The first aim raises difficulties of definition and valuation which are almost insuperable. Personally I would have preferred a definition which only considers public property to exist if its value is in excess of the unredeemed portion of the debt incurred in obtaining that property. Such a definition would show public property to be very small indeed, or even negative if the whole of the national debt is allowed for. Mr. Campion thinks it impossible to have public property negative, so considers that more than a specific degree of public control makes property public; the problem is to determine the "specific" degree. The property of the Central Electricity Board and of the London Passenger Transport Board is closely controlled by the State, but as the capital is privately subscribed and the directors are primarily responsible to the shareholders such property is not included as being public. On the other hand when local authorities borrow in order to buy land and build houses, to provide transport, gas, water and electricity the capital is still privately subscribed, but the change in responsibility makes the property so obtained into " public property ". The distinction is not very sharply defined.

Another disadvantage of the definition utilised is that the sum of private and public property exceeds total property in the country not only because war debt is private property against which no material assets exist, but because such items as houses of local authorities are included as public property while the debts incurred by the local authorities for housing are included in private property.

Private property is valued when it changes hands, either in the market or at the death of the owner, thus providing the two methods of assessing private property.[1] Public property is difficult to assess because it rarely changes hands after it has been acquired, though cost, value of similar property in private hands, or net income derived from it may be of some guidance. Because of special difficulties no serious valuation has been attempted for two items of public property which are dissimilar to property in private hands and do not yield a net income in the normal sense. These items are roads and armaments. Perhaps the omission is wise, yet to many people these must seem very important.

The proportion of total property which is publicly owned has been increasing gradually and in 1932–4 was between 10 and 17 per cent. when property belonging to charities is included in public property, when some allowance is made for roads and armaments, and when duplication is avoided by deducting Government and Municipal debt from the total. Professor Jewkes in an interesting introduction has some comments to make about the growth of public control which has greater social repercussions than the growth in public ownership.

The " Estate Method " gives the amount of property in private hands, which is less than total private property obtained by the " Income Method " because total private property includes property of clubs, co-operative and friendly societies, livery companies and non-charitable institutions not subject to individual rights of ownership. Mr. Campion obtains a difference which is surprisingly large, being at least of the same order as the value of total public property :

1926–8	£ millions
Total private property	22,300 ± 1,190
Property in private hands (higher estimate)	18,640 ± 540
∴ Private property not subject to individual rights of ownership ..	3,660 ± 1,730
Total public property	2,270 ± 320

---

[1] The Income Method is simply a method of obtaining a market valuation for that portion of property which does not come on to the market.

It would be interesting if some attempt were made to measure, independently, private property not subject to individual rights of ownership. Mr. Campion is unable to explain completely the high figure obtained, and this figure would have been even larger if in the income method he had not often favoured lower estimates than those of other workers, as for instance when "no allowance is made for marketable potential wealth which is not at the time yielding income in the form of money or services".

Mr. Campion concludes that among individuals "inequality has been lessened but property is still very unevenly distributed". Examination of the figures shows that in spite of high death duties and high progressive income taxation the rate of change has been remarkably small. We are told "taxation of incomes has restricted the growth of new fortunes" yet, despite a falling price level, 90,000 persons over 25 had property valued at over £25,000 in 1936 compared with only 70,000 in 1926–8, an increase which is relatively much greater than the increase in population and total wealth. It is of interest to note that estates are rarely kept intact by insurance, the premiums of which combined with income and sur-tax may in certain cases make taxation to be in excess of 20/- in the £. In 1936 insurance policies became relatively less important as estates increased, until for estates of over £100,000 they represented but 2 per cent. of the total value of such estates.

In 1911–13 87.5 per cent. of persons over 25 were estimated to have property valued at less than £100, in 1936 the proportion had been reduced to 75.3 per cent. The margin of error is very great in these cases and changes might be due partly to changes in administrative practice as well as to changing price levels. Even so the improvement looks less convincing if it is said that 16.4 million persons over 25 in 1911–13 possessed property valued at less than £100, and that the number had increased to 17.2 million in 1936. This occurred despite the fact that an enormous amount of private property was created by the "public" in the period by borrowing.

Mr. Campion is to be congratulated on his work. In its course he must have obtained many other interesting figures, such as estimates of the distribution of property in private hands by age groups. It is to be hoped that he will publish some of these.

H. S. Booker.

L'Utilité Marginale de C. Menger à J. B. Clarke. By Gaëtan Pirou. 2nd edition. Paris: Domat Montchrestien. 1938. 323 pp. 85 francs.

Les Théories de l'équilibre économique: L. Walras et V. Pareto. By Gaëtan Pirou. 2nd edition. Paris: Domat Montchrestien. 1938. 465 pp. 85 francs.

The lectures on the history of economic theory which Professor

Pirou has now published in these two books were originally delivered at the École Practique des Hautes Études between 1931 and 1934. The first editions of these lectures were published only in typescript. Their publication in a generally accessible form will be particularly welcomed by anyone concerned in teaching the history of economic theory as there is a serious lack of readable and comprehensive books on the period from 1870 to the Great War. Professor Pirou has evidently taken great pains to achieve lucidity in exposition and to avoid detailed discussion of minor points, in consequence any reasonably intelligent second year student would be able to make use of the books.

The treatment of the development of the theory of marginal utility in *L'Utilité Marginale de C. Menger à J. B. Clarke* is, however, open to a number of criticisms. In the first place, Professor Pirou provides no background to Menger's work so that it appears as though no earlier economists had attempted to analyse human wants or utility. No doubt in the lectures preceding those published in this book Professor Pirou has dealt with the forerunners of the marginal utility theorists, but the book as such suffers from the absence of any account of these developments. In the second place, Professor Pirou completely ignores Marshall's and Wicksteed's work on the theory of marginal utility without giving any explanation of this omission. A student reading this book therefore would get the impression that neither of them made any contribution to the subject. In the third place, the treatment of the theory of imputation is peculiarly unsatisfactory, possibly because Professor Pirou does not seem quite decided as to whether it should properly be included in a book on marginal utility or not. Thus he deals with the theories of imputation of Menger and Wieser but is himself curiously uncritical of them. The later developments and the attempts to solve the problem on the basis of the assumption of variable technical co-efficients are to all intents and purposes ignored. It is perhaps on this account that the latter half of the book seems unsatisfying. The chapters on the Austrian school, particularly those on Menger and Weiser, lead one to expect that Professor Pirou is going to display the revolutionary effect of the marginal analysis on economic theory in the fifty years before the Great War. Instead he is mainly concerned in the last five chapters with the development of American views as to the relation between utility as such and value. The discussion in these chapters is of considerable interest, but I think the book would have been more intellectually satisfactory if Professor Pirou had interpreted his term of reference more widely. The second book reviewed here, *Les Théories de l'équilibre économique : L. Walras et V. Pareto*, is not open to criticism of the same sort. It is indeed possible to disagree with Professor Pirou's estimations of the importance of the contributions of Leon Walras and Pareto. For example, though one must agree that Walras' work was of greater intrinsic originality than Pareto's, Professor Pirou seems to underrate the importance of the latter's attempt to state the theory of value in objective instead of psychological terms in the *Manuel*. Nevertheless, disagreement on such matters does not really detract from the usefulness of the book as providing a clear and non-mathematical statement of the theories of economic equilibrium, nor does it any way diminish the interest of the account of the influence of Auguste Walras and Cournot on Leon Walras. In addition we must be grateful to Professor Pirou for showing the inter-relations between Pareto's sociology and his economics.

Whatever the incompleteness of the first of these two books, taken together they form a stimulating comparative study of the two main lines of development of economic theory after 1870. As such they have interest and importance for the economist in general as well as providing much needed textbooks. Both books have useful bibliographies.

MARIAN BOWLEY.

De la Nature de la Richesse et de l'Origine de la Valeur. By AUGUSTE WALRAS, with an introduction by GASTON LEDUC and a preface by GAËTAN PIROU, reprinted in the Collection des Principaux Économistes. Librairie Felix Alcan. Paris. 1938. xv + 343 pp. 50 francs.

Professor Pirou has rendered a great service to all students of the history of economic thought in republishing Auguste Walras' most important book on economic theory, *De la Nature de la Richesse et de l'Origine de la Valeur.* The new edition contains, as well as the main text, J. B. Say's hitherto unpublished notes on it; these are of particular interest as much of the book is devoted to criticism of Say's theory of value; their inclusion adds considerable piquancy to the text as Say disliked being criticised as much as most people. Auguste Walras' *Mémoire sur l'Origine de la Valeur d'Échange* is also included; as it contains the most precise statement of his theory of value its reprint will be welcomed by all students of Walras.

Professor Leduc's admirable introduction is in itself a contribution to the history of economic theory. He makes it clear that the general impression that Auguste Walras' importance to economists is merely due to the fact that he was the father of Leon and had considerable influence on his work is mistaken. The error it would seem arose because, until Leon Walras with filial piety drew attention to his father's work, very few economists had heard of Auguste Walras, much less studied his work. Professor Leduc points out, however, that Auguste Walras' challenge to the authority of J. B. Say's theory of value has merits of its own, and that his attempts to derive value from scarcity is of considerable interest in connection with certain modern economists who have adopted the scarcity approach to economics. It might fairly be added, though Professor Leduc does not deal with this aspect, that the mere fact of the existence of Auguste Walras' criticism of J. B. Say's authority in French economics has particular interest in comparison with the contemporary criticisms of Ricardo's authority in England.

MARIAN BOWLEY.

An Outline of the Science of Political Economy. By NASSAU W. SENIOR. Reprinted in the Library of Economics, London. Allen and Unwin. 1938. 249 pp. 7s. 6d.

The choice of Senior's *Political Economy* as the first volume of the new Library of Economics will be welcomed by all economists interested in the development of economic thought. Though there have already been six editions of Senior's main work on theory, the sixth was published in 1872 and in consequence it cannot be readily acquired. It is a remarkable indication of the neglect of Senior that although the main works of Ricardo and John Stuart Mill have been edited and reprinted several times in the last half century and even Malthus' *Principles of Political Economy* was reprinted in 1936, we have had to wait until 1938 for a modern reprint of Senior's *Outline.*

The editors of the Library have included in the new edition the famous appendix by Senior to Whately's *Elements of Logic*, " On certain terms which are peculiarly liable to be used ambiguously in Political Economy," which was first published in 1826. (There appears to be a misprint in the date given on the back of the main title page where it appears as " published originally in *Elements of Logic* by Richard Whately (1836) "). This appendix is of particular interest in a study of Senior's work as it contains his earliest and one of his clearest statements of the relation of rent to other forms of income. At the same time it shows that Senior was familiar with the work of the more important continental economists before he started lecturing in Oxford. The editors have also included an analysis of the changes in the section headings of the *Outline* which Senior made in successive editions, but they omit to state in which editions these alterations first occurred. Apart from these heading changes, none of which are of much importance, Senior made no alterations in the text between the first edition in 1836 and the last edition published in his lifetime, the fifth edition, 1863. This was no doubt because he had hoped in the latter part of his life to write a new and complete book on principles, and attempts to bring the *Outline* into conformity with his fully matured ideas, particularly on method and on the theory of capital, would have involved the rewriting of large sections.

The only criticism I have to make to the new edition is that the editors have reproduced the excessively small and unpleasant print of the old editions. It is to be hoped that their historical sense will weaken sufficiently to allow them to make some concession to the flesh if necessary in future volumes of the Library.

The list of future publications of the Library suggests that at last it may become possible for every student and library to possess copies of the more important works of the classical school. Every economist will wish the Library success.

MARIAN BOWLEY.

International Economics. By P. T. ELLSWORTH. Macmillan, London. 529 pp. 18s. net.

This is a textbook on the theory of international trade and on trade policy. It contains chapters on the transfer problem, import quotas, exchange control, and other topical subjects. Professor Ellsworth has a gift for presenting economic analysis clearly and simply; he has read all the right books; and he has succeeded in his object of compiling a satisfactory and up-to-date text.

(No signature.)

An Approach to a Price Theory for a Changing Economy. (Studies in History, Economics and Public Law, edited by the Faculty of Political Science of Columbia University, Nr. 453.) By MOSES ABRAMOVITZ. New York: Columbia University Press. London: P. S. King & Son. 1939. 158 pp. 14s.

Enterprising economists have for some time devoted themselves to the task of working out an economic theory which deals with processes instead of states of rest. As these efforts gradually begin to bear fruit, it is comforting to learn that they all more or less cover the same ground. In this field, with the exception of Dr. Lundberg's great pioneer work[1] (which so far has not found the attention it deserves), Professor Hicks' *Value and Capital* will for some time to come remain the outstanding achievement. It therefore seems convenient to adopt it as a standard of reference for the evaluation of other contributions.

With the present volume Dr. Abramovitz enters the field and the similarity of his approach to the Hicksian is striking indeed. Both authors, spurning the homely hearths of the Stationary State, feel the call of the wild, unexplored World of Change. Both construct models in which the principal categories have time-dimensions, both analyse dynamic processes in terms of entrepreneurial investment plans, both struggle bravely with the indeterminateness of expectations. With a common object of study and a common theoretical background the differences in nuances and emphasis become all the more significant.

Contrary to Professor Hicks, Dr. Abramovitz does not first lay the solid basis of static equilibrium theory before climbing the lofty heights of Dynamics. In ch. II (pp. 22–64) he examines at some length those attempts, centring around the "cobweb theorem", which have been made to introduce Time into the framework of traditional theory. At the end of the chapter his dissatisfaction with all attempts to patch up equilibrium analysis in a world of change has grown so intense that he decides to drop it altogether.

It would seem, however, that here our author has poured out the baby with the bath-water. Whether or not there is in reality a "tendency towards equilibrium" (and whatever that may mean), equilibrium analysis is the only method known which allows us to test *simultaneously* the internal consistency of the economic plans of a number of individuals *and*—in a free exchange economy—the mutual compatibility of these plans. And the baby's ghost does not fail to take its revenge in due course. For in the latter part of the book it becomes painfully evident that Dr. Abramovitz in his scorn for all equilibrium analysis has effectively barred himself from all process analysis.

---

[1] Erik Lundberg, *Studies in the Theory of Economic Expansion.*

For the study of a world of change the most appropriate procedure appears to be this: to start with the (dated) production plan of the firm, thence to proceed to intertemporal (partial) market analysis, to continue with the study of the "temporary equilibrium of the whole system", and to end up with process analysis in terms of time-sequences *à la* Lundberg. Dr. Abramovitz' disdain for equilibria naturally leads him to avoid market analysis altogether, and all he has to offer us after the first step is (in ch. VII) a rather half-hearted attempt to work out the investment plan "for an industry" which must be so small as not to affect total incomes! (footnote 13 on p. 128). Occasionally, however, our author's innate good sense and acute understanding get the better of his anti-equilibrium outlook, and his examination of "the industry" runs in terms of a "standard plan" which is defined as "that set of investments whose results bear out the expectations of the entrepreneurs" (112), in other words: which would maintain equilibrium over time.

It seems a pretty safe guess that until it is generally realised that dynamic equilibrium theory is nothing else but a generalised theory of the forward market, our progress in this direction will be extremely slow. In fact, it is readily seen that the introduction of expectations will sooner or later force this course upon the theory.[1] For expectations involve intertemporal price-relations, but these cannot be made determinate without an intertemporal market.

It is most depressing to see Dr. Abramovitz stopping short of such intertemporal market analysis while he has all the material necessary for it in his hands. Again and again, in his interesting comments on speculation, in his discussion of the dynamic function of the carry-over (pp. 47–50) he has the ball at his feet; but with disconcerting regularity he refuses to kick it in a theoretical direction.

These few critical remarks are not meant to detract from the intrinsic value of a book which is a most welcome piece of pioneer work. They are rather intended as a tonic to the theoretical impulses of the author who in the preface has warned us that, dismayed as he is, he will quit theory altogether. There are many paths leading into the unexplored World of Economic Change. They all need careful reconnoitring, and we cannot afford to lose a single man.

[1] Cf. Mr. Hawtrey's excellent remarks on this point in his review of "Value and Capital", *Journal of the Royal Statistical Society*, Vol. CII, Part II, 1939, pp. 309–10.

L. M. LACHMANN.

Recent Important Foreign Books on Economics

The Librarian of the British Library of Political and Economic Science has made arrangements, as a supplementary check to the purchases of the Library, to receive regularly every quarter from competent foreign scholars lists of the most important books in their respective fields of study published in their own countries (or languages as the case may be) during the preceding three months. It appeared to the Editorial Board of ECONOMICA that these lists might prove useful to other institutions, and the lists of books on economics will therefore be published regularly in future issues of ECONOMICA. It must be understood, however, that the Editorial Board of ECONOMICA accepts no responsibility for the selection of the books included in the list.

FRENCH BOOKS

(Selected by M. Robert Marjolin).

PERROUX, FRANÇOIS : *Cours d'Économie Politique.* Ière éd. Paris. Vol. I.

PIROU, GAËTAN : *Introduction à l'Étude de l'Économie Politique.* Paris. 303 pp.

RIST, CHARLES, and PIROU, GAËTAN, Eds. : *De la France d'Avant-Guerre à la France d'aujourd-hui : 25 ans d'évolution de la structure économique et sociale française.* Paris. 592 pp.

ITALIAN BOOKS

(Selected by Professor Luigi Einaudi).

CATTANEO, CARLO : *Saggi di Economia Rurale, a cura di Luigi Einaudi.* Turin. 388 pp.

Cournot nella Economia e nella Filosofia : (a symposium by Amoroso, Baudin, Bordin, de Pietri Tonelli, *etc.*). Padua. iv, 245 pp.

LORENZONI, GIOVANNI : *L'Ascesa del Contadino Italiano dopo la Guerra. (Inchiesta sulla Piccola Proprietà Coltivatrice Formatasi nel dopo Guerra).* Rome. 437 pp.

SERPIERI, ARRIGO : *La Stima dei Beni Fondiari.* Florence. viii, 314 pp.

VITO, FRANCESCO, *and others* : *Gli Aggruppamenti di Imprese nell' Economia Corporativa.* Milan. viii, 220 pp.

Books Received

ABRAMOVITZ, M.: *An Approach to a Price Theory for a Changing Economy.* Columbia University Press, New York. 1939. 158 pp. 14s.

AMOROSO, L., etc.: *Cournot.* Cedam Padova, Italy. 1939. 243 pp. L.20.

ANASTASIU, O. A.: *Die Kontrollsteuern.* Krafft and Drotleff, Sibiu-Hermannstadt. 1939. viii, 176 pp.

BANK OF GREECE: *Report, 1938.* Athens. 1939. 48 pp.

BARTHOLIN, P.: *Les Conséquences Économiques des Sanctions.* Librairie du Recueil Sirey, Paris. 1939. 200 pp.

Beiträge zur Pensionsversicherung im Deutschen Reich. Verlag von E. S. Mittler & Sohn, Berlin. 1939. 125 pp.

BEVERIDGE, SIR W.: *Prices and Wages in England.* Vol. I. Price Tables: Mercantile Era. Longmans, Green & Co., Ltd. 1939. ix, 756 pp. 31s. 6d.

BOARD OF TRADE: *Report by the Food Council 1938.* H.M.S.O. 1939. 32 pp. 6d.

BREYCHA-VAUTHIER, A. C. de: *Sources of Information.* George Allen & Unwin, Ltd. Columbia University Press. 1939. 118 pp. 5s.

CATTANEO, C.: *Saggi di Economia Rurale.* L. Einaudi (Ed.). Giulo Einaudi, Turin. 1939. 338 pp.

CHINESE AUTHORS: *Agrarian China.* George Allen & Unwin, Ltd. Introduction by R. H. Tawney. 1939. xviii, 258 pp. 10s. 6d.

CLARK, C.: *A Critique of Russian Statistics.* Macmillan & Co., Ltd. 1939. v, 76 pp. 6s.

CONFERENCE PERMANENTE DES HAUTES ETUDES INTERNATIONALES: *Roumanie.* Institut International de Cooperation Intellectuelle, Société des Nations, Paris. 1938. 144 pp.

DURANT, R.: *Watling, A Survey of Social Life on a New Housing Estate.* P. S. King & Son, Ltd. 1939. xiv, 128 pp. 7s. 6d.

——— *The Dynamics of Automobile Demand.* American Statistical Association and the Economic Society in Detroit, Michigan, December 27th, 1938. 1939. 139 pp.

FIRTH, R.: *Primitive Polynesian Economy.* George Routledge & Co., Ltd. 1939. xi, 387 pp. 15s.

FORD, P.: *Incomes, Means Tests and Personal Responsibility.* P. S. King & Son, Ltd. 1939. ix, 86 pp.

GANDHI, M. P.: *The Indian Sugar Industry (Protection) Supplement,* 1939. Commercial Gazette Press, Calcutta. 1939. 36 pp. Rs. 0-8-0.

GILBERT, M.: *Currency Depreciation and Monetary Policy.* University of Pennsylvania Press, Oxford University Press. 1939. xiii, 167 pp. 9s.

GOULDEN, C. H.: *Methods of Statistical Analysis.* John Wiley & Sons Inc. New York. Chapman & Hall, Ltd. 1939. vii, 277 pp. 17s. 6d.

GRADUATE FACULTY OF POLITICAL AND SOCIAL SCIENCE: *The Struggle for Economic Security in Democracy.* New School for Social Research. 1939. 136–312 pp. $75.

GRIFFIN, J. I.: *Strikes.* Columbia University Press, New York. P. S. King & Son, Ltd. 1939. 319 pp. 16s.

GRONDONA, L. St. C.: *National Reserves.* George Allen & Unwin. 1939. 189 pp. 7s. 6d.

HARLOW, V.: *The Character of British Imperialism.* Longmans, Green & Co., Ltd. 1939. 38 pp. 1s. 6d.

HAYEK, F. A. v.: *Freedom and the Economic System.* Public Policy Pamphlet, No. 29, University of Chicago Press, U.S.A. Cambridge University Press. 1939. iv, 38 pp. 1s. 3d.

HOON, E. E.: *The Organisation of the English Customs System 1696–1786.* The American Association, New York. 1939. ix, 322 pp. 18s.

HOTELLING, H.: *The Work of Henry Schultz.* Reprint from *Econometrica*, Colorado. 1939. 97–103 pp.

INTERNATIONAL LABOUR OFFICE: *The Minimum Wage, an International Survey.* League of Nations. P. S. King & Son, Ltd. 1939. viii, 257 pp. 5s. $1.25.

JATHAR, G. B., and BERI, S. G.: *Elementary Principles of Economics.* Oxford University Press. 1939. xii, 387 pp. 4s. 6d.

KOCK, M. H. de: *Central Banking.* P. S. King & Son, Ltd. 1939. xiv, 354 pp. 15s.

KOOPMANS, T.: *Tanker Freight Rates and Tankership Buildings.* Netherlands Economic Institute. Haarlem. P. S. King & Son, Ltd. 1939. xii, 219 pp.

KRISTENSEN, T.: *Faste og variable Omkostninger.* Ejnar Munksgaard, Copenhagen, 1939. 169 pp. Kr. 9.50.

McGUIRE, E. B.: *The British Tariff System.* Methuen & Co., Ltd. 1939. v, 312 pp. 10s. 6d.

——— *The Madras Agriculturists' Relief Act—A Study.* Bulletin of the Department of Economics, No. 2. The University, Annamalainagar. 1939. viii, 113 pp.

MARQUAND, H. A., and others: *Organised Labour in Four Continents.* Longmans, Green & Co., Ltd. 1939. 518 pp. 15s.

Ministry of Labour Report, 1938. H.M.S.O. 1939. 136 pp. 2s.

MONTGOMERY, G. A.: *The Rise of Modern Industry in Sweden.* P. S. King & Sons, Ltd. 1939. viii, 287 pp. 10s. 6d.

MYRDAL, G.: *Monetary Equilibrium.* W. Hodge & Co., Ltd. 1939. xi, 214 pp. 12s. 6d.

NAYUDU, B. V. N., Ed.: *Report on the Working of Prohibition in the Salem District.* Annamalai University, Bulletin of the Department of Economics No. 3, St. Joseph's Industrial School Press, Trichinopoly. 1939. 104 pp.

PIATIER: *L'Economie de guerre.* Librairie Générale de Droit et de Jurisprudence, Paris. 1939. xiii, 304 pp.

PIROU, G.: *Introduction a l'étude de L'Economie Politique.* Recueil Sirey, Paris. 1939. 303 pp. 50 fr.

PIROU, G., Ed.: *Les nouveaux courants de la théorie économique aux Etats Unis.* Tome I. *Les Précurseurs.* Les Editions Domat-Montchrestien, Paris. 1939. 347 pp.

PLANT, M.: *The English Book Trade.* George Allen & Unwin, Ltd. 1939. 499 pp. 16s.

POHLY, C.: *Les Exportations de la France et les Nouveaux Pays Industriels.* Les Presses Zoniennes, Ambilly. 1939. 138 pp.

POSTAN, M. M.: *The Historical Method in Social Science.* Cambridge University Press. 1939. 38 pp. 1s. 6d.

QURESHI, A. I.: *State Banks for India.* Macmillan & Co., Ltd. 1939. 248 pp. 12s. 6d.

Report of the Unemployment Assistance Board, 31st December, 1938. H.M.S.O. 1939. iv, 198 pp. 3s.

ROBBINS, L.: *The Economic Basis of Class Conflict.* Macmillan & Co., Ltd. 1939. xiv, 277 pp. 6s.

ROSSI-RAGAZZI, B.: *L'apprezzamento medio esterno della lira nel triennio 1935–37.* Series B, No. 6. Confederazione Fascista dei Lavoratori del Commercio. Tipografia Armani di M. Courrier, Rome, 1938. 63 pp.

RUSCHE, G., and KIRCHHEIMER, O: *Punishment and Social Structure.* Columbia University Press, New York. 1939. xiv, 268 pp. $3.00.

SARKAR, B. K.: *Economic Development, Vol. II.* Chuckvertty Chatterjee & Co., Ltd. Calcutta. 1939. xii, 308, iv. Rs. 6.

SCHNEIDER, E.: *Einführung in die Grundfragen des industriellen Rechnungswesens.* G. E. C. Gads Forlag, Copenhagen. 1939. ix, 180, vii. Kr. 10.

STALEY, E.: *World Economy in Transition.* Council on Foreign Relations, New York. Royal Institute of International Affairs. 1939. xi, 340 pp. 12s. 6d. $3.00.

STRYCKER, C. de: *Banque Nationale.* Goemaere, Brussels. 1939. xx, 344 pp.

TSCHUPROW, A. A.: *Principles of the Mathematical Theory of Correlation.* William Hodge & Co., Ltd. 1939. x, 194 pp. 12s. 6d.

UNIVERSITY OF LIVERPOOL: *Population Problems on new Estates.* University Press of Liverpool. 1939. 51 pp. 1s.

VITO, F.: *I Sindacati Industriali, Consorzii e Gruppi.* Dott. A. Giuffrè, Milan. 1939. c, vii, 195 pp.

WAIGHT, L.: *The History and Mechanism of the Exchange Equalisation Account.* Cambridge University Press. 1939. xiii, 191 pp. 8s. 6d.

WOODS, R. L.: *America Reborn.* Longmans, Green & Co., Ltd. 1939. vii, 376 pp. 15s.

WRIGHT, C. M.: *Economic Adaptation to a Changing World Market.* Ejnar Munksgaard, Copenhagen. 1939. 305 pp. Sewn 8s. 6d., bound 10s. 6d.

ZIMMERMAN, C. C., and WHETTEN, N. L.: *Rural Families on Relief.* Research Monograph XVII. United States Government Printing Office, Washington. 1938. xxiv, 161 pp.

BRITISH TREAS

TREASURY BILLS ISSU

Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Years																										
1921																										
1922	690	690	690	680	655	630	610	600	580	565	555	550	543	528	513	498	496	511	526	546	561	584	597	611	617	614
1923	562	556	561	561	561	557	549	543	530	515	500	485	489	479	470	458	451	452	452	450	451	452	457	461	464	459
1924	495	495	497	497	492	492	485	475	461	447	433	424	413	408	403	395	389	394	392	396	400	402	412	417	427	432
1925	495	495	492	482	477	472	462	451	446	431	421	411	411	411	411	408	413	418	418	421	430	434	444	446	449	454
1926	516	516	517	512	498	488	475	460	454	448	436	430	426	425	417	419	424	434	439	449	459	464	471	479	480	481
1927	557	557	557	552	547	537	522	512	502	495	485	477	473	473	466	456	454	454	454	459	464	469	471	476	481	481
1928	553	550	543	533	518	508	493	488	480	470	458	448	443	436	436	441	446	446	451	461	466	469	474	481	484	484
1929	560	560	555	560	560	560	547	529	514	504	489	482	477	477	472	477	472	472	467	470	478	493	503	513	515	519
1930	573	563	548	531	516	498	479	464	449	434	418	405	395	390	390	388	390	390	393	402	402	407	422	433	441	446
1931	545	548	540	530	515	505	495	485	470	460	445	430	415	415	413	416	421	431	436	439	444	449	459	474	479	489
1932	540	538	531	518	504	489	476	464	454	449	444	449	454	459	465	477	490	499	504	512	514	514	519	523	520	517
1933	666	661	657	652	642	632	622	607	592	582	577	569	556	542	534	530	536	543	550	559	560	557	562	567	572	580
1934	592	577	562	547	537	526	516	506	496	483	470	463	458	458	466	474	484	488	494	494	494	499	500	499	492	487
1935	451	447	441	434	422	411	403	396	381	368	358	361	361	361	373	383	393	405	416	427	437	452	465	475	480	485
1936	565	556	550	545	540	535	525	515	505	505	505	503	498	493	498	508	518	528	538	548	558	568	573	578	583	595
1937	609	599	588	575	560	550	540	530	520	510	505	500	500	497	500	505	515	525	530	530	530	530	535	535	540	545
1938	622	622	612	597	587	572	557	542	532	522	517	512	512	512	512	522	532	545	560	570	570	570	575	580	585	583
1939	474	449	426	411	396	381	366	351	346	351	356	366	376	387	394	402	402	419	429	439	449	459	464	469	479	484

TREASURY BILLS ISSUED OTHERWIS

1921																										
1922	378	374	371	359	357	360	365	357	353	454	341	344	*	298	287	269	263	253	245	236	210	212	206	200	194	*
1923	152	153	154	154	153	159	160	155	143	140	141	146	127	151	138	135	138	133	136	140	141	156	156	148	156	145
1924	153	152	153	154	155	157	155	153	154	154	155	155	*	154	155	156	156	152	147	158	165	168	168	167	167	*
1925	154	156	155	151	154	154	153	154	146	149	150	148	*	*	152	156	150	141	143	147	145	148	148	148	149	*
1926	*	128	134	135	141	140	138	137	138	129	132	131	*	*	124	125	126	122	123	126	126	132	133	135	135	*
1927	*	115	118	119	124	135	127	127	126	122	118	115	*	*	110	112	113	110	111	110	110	110	115	126	116	*
1928	94	92	91	90	89	89	89	88	85	85	84	84	84	84	84	84	85	82	84	86	87	93	94	95	96	97
1929	224	220	208	199	221	231	227	224	225	223	223	218	223	231	235	232	234	232	235	232	230	235	243	244	241	238
1930	227	222	210	208	203	201	199	194	197	195	197	194	*	185	181	179	180	184	182	183	175	175	185	185	182	*
1931	164	158	157	157	157	163	151	142	136	138	142	138	*	146	146	145	140	131	136	132	131	138	147	149	147	*
1932	*	135	122	108	100	101	98	98	99	116	132	126	*	*	134	135	132	126	117	105	97	88	102	105	102	*
1933	269	265	246	238	227	223	211	217	213	208	199	208	*	227	234	234	224	219	214	404	394	411	409	419	417	*
1934	348	351	343	346	348	347	342	344	343	343	341	346	342	354	340	356	359	365	370	372	370	362	362	361	360	361
1935	458	445	429	433	433	421	409	401	397	402	430	430	438	446	440	441	439	435	427	420	415	405	405	406	403	392
1936	332	339	328	321	311	284	271	268	269	259	257	259	*	204	197	226	227	225	219	212	208	202	214	215	210	*
1937	*	175	164	158	155	170	167	159	159	172	173	172	*	*	187	176	171	157	154	145	141	151	135	140	141	132
1938	*	312	309	301	292	282	277	276	273	282	284	289	*	*	305	307	296	289	282	278	276	281	309	311	303	306
1939	524	525	524	518	520	502	499	500	510	503	506	502	*	511	512	498	499	513	510	506	506	535	539	542	540	*

* Not

SURY BILLS

ED BY TENDER.

7	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
		660	660	670	670	670	670	655	660	670	675	680	680	685	685	695	705	705	705	700	695	695	690	690	690	
6	616	616	603	588	578	578	568	565	567	568	567	577	585	590	585	585	585	584	577	577	581	581	581	581	567	
9	451	448	450	444	441	443	443	446	451	452	454	454	459	467	470	475	480	483	488	493	497	496	500	499	495	
26	426	429	433	433	435	435	431	429	429	434	434	434	440	450	455	457	457	457	457	455	465	480	485	490	490	
9	447	451	452	452	457	464	469	470	470	473	470	470	475	482	486	490	494	499	502	509	510	509	513	518	516	
2	485	480	480	480	485	490	495	500	503	503	507	512	512	517	527	532	537	542	547	547	552	554	559	558	557	
76	478	483	485	490	495	500	500	499	499	499	505	514	519	527	530	535	535	540	545	555	556	561	566	566	561	556
86	486	488	493	503	503	501	501	501	501	501	503	508	513	518	518	518	523	523	530	535	540	545	555	560	560	
4	514	514	514	514	519	524	529	524	519	519	524	525	530	535	540	545	545	550	555	560	565	570	573	573	573	
46	446	453	458	468	473	473	476	476	466	466	466	471	476	476	481	486	491	496	501	508	518	528	535	545	550	
89	493	495	500	505	510	512	512	512	507	502	507	501	496	496	499	499	494	499	504	509	519	524	529	529	535	
15	516	516	521	530	535	540	555	565	565	566	569	573	578	578	583	584	585	595	605	610	625	640	650	655	659	661
89	594	596	593	586	579	570	569	572	567	562	560	560	560	563	568	570	575	580	585	585	585	590	595	597	597	
82	476	470	461	457	454	450	445	435	431	427	424	424	424	424	423	424	424	422	423	425	435	441	449	451	451	
90	490	495	500	505	510	515	520	520	525	530	535	540	545	549	550	550	550	550	555	560	565	565	565	565	565	
05	615	620	625	630	630	630	630	630	625	621	621	619	619	619	615	608	603	603	603	603	608	613	617	617	614	
53	552	548	543	543	548	558	568	573	573	573	573	573	573	581	595	610	612	612	612	612	612	617	622	622	622	
78	573	568	568	565	560	555	555	555	550	545	537	526	521	521	526	526	522	517	517	522	522	517	507	500	493	488
89	494	499	504																							

E THAN BY TENDER (TAP BILLS).

		547	542	532	521	507	496	496	492	494	493	*	482	465	434	429	422	417	415	408	405	396	394	398	370	
1	161	149	152	153	149	144	147	148	147	148	147	147	144	143	152	155	156	158	152	155	155	153	152	153	152	
45	146	149	152	153	155	156	160	162	165	172	175	172	171	169	164	160	157	155	154	153	149	150	149	150	*	
7	166	166	166	165	163	161	161	162	163	163	163	*	163	162	161	162	161	157	159	167	159	148	148	154	*	
53	153	153	152	152	151	153	155	155	155	156	156	*	155	154	150	147	143	142	140	137	137	136	133	131	*	
	138	133	133	130	131	131	135	137	136	136	133	*	*	135	133	129	126	125	121	119	118	118	115	119	*	
	115	117	119	117	117	117	116	116	114	114	112	114	*	112	111	109	105	104	103	102	101	100	99	98	*	95
8	99	100	101	103	106	109	111	113	118	121	124	128	132	136	145	155	169	180	190	204	206	212	224	226	*	
3	243	244	242	251	256	252	248	247	252	253	244	*	244	252	253	249	248	245	237	229	232	240	232	232	*	
4	187	183	180	176	175	175	165	166	179	183	183	*	187	180	181	177	178	178	171	167	164	172	171	168	*	
4	150	146	143	152	148	143	139	133	144	154	138	*	*	104	109	111	119	127	122	117	119	144	153	154	157	
	234	232	227	231	230	229	268	261	258	288	295	292	*	290	289	282	273	261	245	261	254	238	247	276	278	267
4	397	391	396	397	406	416	421	420	424	432	437	428	426	410	404	383	381	377	358	357	329	336	342	346	342	
3	365	367	370	371	378	381	373	383	392	398	401	399	405	407	409	413	422	428	427	431	435	438	440	441	*	
3	397	394	390	383	385	365	359	359	359	363	359	*	358	353	348	347	351	350	346	341	341	343	333	333	*	
8	191	186	182	176	178	173	168	165	176	188	191	*	*	214	224	224	228	235	235	223	220	203	205	202	*	
	316	308	308	315	314	303	285	283	289	291	291	296	*	297	299	278	283	290	290	290	287	302	305	317	320	
	298	302	304	309	320	303	296	294	317	324	335	346	*	379	384	379	386	405	407	404	404	445	465	474	495	498
3	563																									

blished.

The Theory of Foreign Exchanges[1]

By F. Machlup

PART I

1. Excessive specialisation has led to the disturbing fact that the techniques developed in economic theory are insufficiently employed in the various applied fields. The courses and textbook chapters on Money and Banking, Cycles, International Trade, Transportation, Public Utilities and others—are all cases in point. The beginning student of economics wonders why he had to waste time on the "useless" tools of analysis that were presented to him in Value Theory and which he never afterwards found of service when he came to the applied fields.

One of the objectives of this article is to show how the simple curve analysis can be used to advantage in the theory of foreign exchanges. The presentation here will be an abridged statement of the essentials.[2] An exposition in a textbook or in class would of course have to be less condensed and would have to include numerous illustrations in order to cover the abstractions with realistic dressing.

Another objective of the article is to incorporate into the theory of foreign exchanges relevant results of recent work in monetary economics. New practices of exchange stabilisation funds, on the one hand, new or modernised economic doctrines on the other hand[3]—both developed only during the last few years—make it necessary to rewrite foreign exchange theory in significant parts. An attempt in this direction will be made, especially in the later sections of this article.

---

[1] Owing to the outbreak of war, it has not been possible for Dr. Machlup to correct the proofs of his article.—*Editor.*

[2] Much of the subject matter presented here is based on Professor Haberler's *International Trade.*

[3] We refer only summarily to the contributions by J. M. Keynes, *The General Theory of Employment, Interest and Money*; Arthur Gayer, *Monetary Policy and Economic Stabilisation*; G. von Haberler, *Prosperity and Depression*; Jacob Viner, *Studies in the Theory of International Trade*; F. A. von Hayek, *Monetary Nationalism and International Stability*; P. Barrett Whale, "International Trade in the Absence of an International Standard," ECONOMICA, 1936, "The Work of the Pre-war Gold Standard," ECONOMICA, 1937; F. W. Paish, "Banking Policy and the Balance of International Payments," ECONOMICA, 1936; Thos. Balogh, "Some Theoretical Aspects of the Gold Problem," ECONOMICA, 1937.

Section I will lay out the conceptual scheme and some simplifying assumptions for the demand and supply analysis of the foreign exchange market. Section II will discuss the factors that determine the elasticities of supply and demand on a foreign exchange market when transactions result exclusively from commodity trade between two countries with independent currencies. Section III will deal with the effects on foreign exchanges of capital movements, unilateral payments, and payments for services, between countries with independent currencies. Section IV will introduce the assumptions of the gold standard in its old and modern forms, and will discuss the causes and effects of gold flows between the countries concerned. Section V will examine the supply and demand conditions on a foreign exchange market under the influence of private pegging and speculating activities, with special consideration of their effects upon interest rates.

SECTION I

2. For the sake of simplicity we shall combine the spot and forward exchange markets, and also the foreign exchange markets at the domestic place (say New York) and at the foreign place (say Paris), into *one* perfect market. These assumptions might be easily dropped at any stage of the analysis, in order to demonstrate the functioning of speculation in spot and forward exchanges, and of arbitrage between the local and foreign markets. Such demonstrations would prove that the merger of all these partial markets into a single foreign exchange market with the one currency as the " commodity " and the other currency as " money " assumes little away from the facts of the real world.

It is not difficult, for example, to translate the demand for dollars on the Paris market into a supply of francs on the combined foreign exchange market, and likewise the supply of dollars on the Paris market into a demand for francs on the combined foreign exchange market.[1]

---

[1] It is a good undergraduate exercise to practice such a translation : starting from a demand curve for dollars in terms of francs the amounts of dollars are shown by the horizontal axis (x), the amounts of francs offered in exchange for these dollars are shown by the rectangle (x y) ; this gives a supply curve of francs for dollars where the abscissae correspond to the values of the rectangles in the original demand curve, while the ordinates on the new supply curve, i.e. the prices of francs in terms of dollars, correspond to the quotient of the abscissae divided by the values of the rectangles $\left(\frac{x}{xy}\right)$ of the original demand curve. The analogous calculation has to be done in order to transform the original supply curve of dollars in terms of francs into a demand curve for francs in terms of dollars. This sounds complicated—yet every sophomore ought to be able to do it, or he has never grasped the meaning of demand and supply curves.

To simplify further we shall speak of two countries only. The abstraction from the existence of more than two countries could be immediately dropped, if the device were adopted to treat the "rest of the world" as the second country, and some composite of the various currencies as *the* foreign exchange. It is, however, less confusing to discuss matters first with reference to two countries only.

3. In good analytical fashion we shall examine the various sources of supply, and purposes of demand, one by one. Let us thus take commodity trade between the two countries as the first thing to be isolated.

If commodity exports are to be the only source of supply of foreign exchange, and commodity imports the only purpose of demand, we have to abstract from the gold standard in its various forms. Sales of gold constitute a supply of foreign exchange, and gold purchases demand for foreign exchange. Gold movements will be introduced only at a later stage of the analysis.

If commodity trade is to be the only factor behind supply and demand on the foreign exchange market, we have to abstract, furthermore, from the supply out of old stocks (foreign balances held by individuals, banks or official funds) and out of new debts (due to foreigners), and from the demand for foreign exchange for purposes of accumulating new stocks of foreign balances and of reducing old debts. In short, foreign lending and borrowing, i.e. the acquisition and diminution of foreign balances and debts, is at this stage ruled out; it will be introduced later.

It goes without saying that foreign long-term investments, unilateral payments, and the exchange of invisible services are all assumed away, if commodity trade is to be studied in isolation.

4. It is clear that the equality of exports and imports follows logically from these assumptions. If foreign lending and borrowing (and the other non-commodity transactions) are ruled out entirely, export surpluses or import surpluses cannot exist even in the shortest run.

It would, of course, appear too unrealistic to assume that the goods imported and exported cross the border at exactly the same moment. And it would be difficult to see how an increase in the demand for imports should make for a *simultaneous* increase of imports and exports, if the timing were thought to refer to the moments at which the goods pass the frontier or the customs house.

This slight difficulty disappears if the time refers to the moment at which the export orders are given and received and if simultaneously with each order the importer buys foreign exchange and the exporter sells foreign exchange. This assumption corresponds, incidentally, to the actual practice of wholesale trade: the importer covers the foreign exchange needed for payment for the orders given, and the exporter sells the foreign exchange expected for the order received, on the forward exchange market, at the time the business is concluded.

If every importer buys the foreign exchange at the time when he gives the order, and if he cannot buy the foreign exchange (directly or indirectly) from anybody but an exporter, it follows that imports cannot exceed, or fall short of, exports, in the sense defined, for even the shortest instants of time.

The volume of imports and exports, however, will depend on the foreign exchange rate at which the amounts of exchange demanded and supplied are equal.

5. A rise in the foreign exchange rate[1] makes imported commodities more expensive in terms of dollars, and exported commodities cheaper in terms of the foreign currency. A fall in the foreign exchange rate makes imported commodities cheaper in terms of dollars and exported commodities more expensive in terms of the foreign currency. This explains why the importers' demand curve for foreign exchange will usually (abstracting from speculative transactions) have a downward slope from the left to the right, and why the exporters' supply curve of foreign exchange will usually have an upward slope from the left to the right. Exceptions will be discussed presently.

Every demand and supply curve must refer to a certain period of time which is allowed for the depicted changes and adjustments to take place. Curves which do not allow any time for market reactions to take place are usually called "instantaneous curves". Apart from these we should for our purposes distinguish at least three sets of curves. The *shortest period* allows only for the effects of the change in foreign exchange rates upon import and export orders, with domestic prices in the two countries unchanged. These effects are too provisional to be of much analytical value, because changes in the quantities of goods to be ordered will affect, with little or no delay, the prices at which the various producers are willing to sell, or the various distributors are willing to buy.

---

[1] Throughout this article the foreign exchange rate is assumed to be expressed in terms of the amount of domestic currency exchanged per unit of foreign currency.—*Editor.*

The *short period* allows, therefore, for both reactions to take place: it shows, for example, how the quantities of foreign exchange supplied by exporters will react upon a rise in the foreign exchange rate after the export industries have adapted their selling prices in dollars to the increase in business.

In other words, the short period demand and supply curves of foreign exchange are not drawn on basis of " given commodity prices " in the two countries, but on basis of " given demand and supply conditions " in the commodity markets of the two countries. These given conditions are the traditional short period curves which assume given tastes of consumers and given fixed equipment of producers.

The *long period* curves on the foreign exchange market are based on long period conditions in the commodity markets of the two countries; the main adjustment of supply, for example, which is allowed to take place in the long run is, of course, that of plant capacity. It is understood that an increase in exports which is expected to be lasting may induce producers to expand plant capacity and to supply their products, after this adoption, in increased quantities or at lower prices. Consequently, the long period curves of the foreign exchange market will be more elastic than the short period curves.

In what follows we shall be concerned with a *short-period* analysis.

6. The argument that short run supply implies *some* lapse of time until the reaction to a change in price takes place does not restrict the validity of the statement that, under the enumerated conditions, exports and imports must balance for any interval of time. Assume that DD' and SS' (Fig. I) are the short period curves for the foreign exchange market. Exports equal imports at the foreign exchange rate OQ. A sudden change in tastes makes for an increased demand for foreign exchange for increased imports. At the given rate, OQ, the amount demanded would be ON, an amount which is, of course, not to be had. Therefore the exchange rate will rise. Under the assumption that

the short-run reaction of supply takes time but no time is allowed, it will rise to OT. At this increased rate, the quantity of foreign exchange demanded (OM) will be no greater than before, which is obvious as long as the " instantaneous supply " is assumed to be perfectly inelastic.

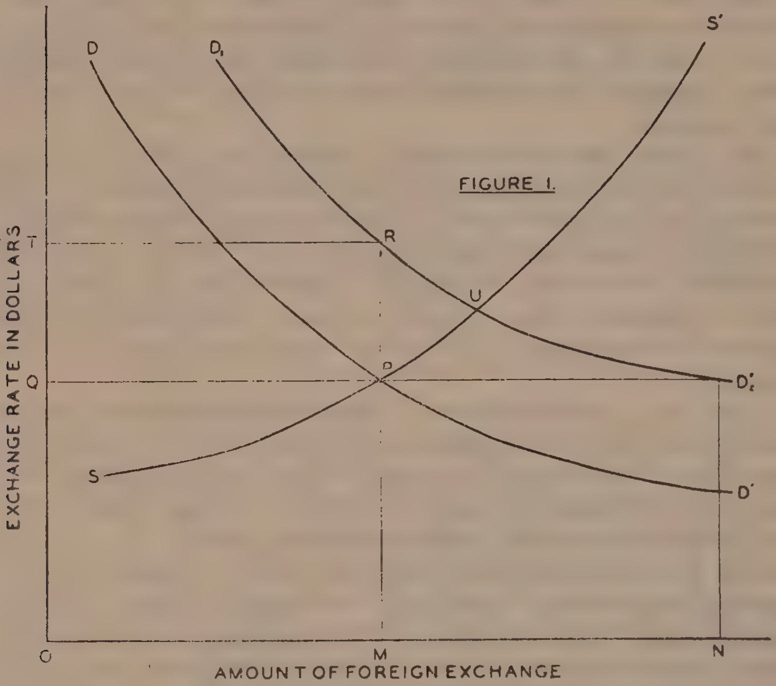


FIGURE I.

It need hardly be mentioned that exports equal imports both in terms of foreign exchange ($OM=OM$) and in terms of dollars ($OMRT=OMRT$). The volume of exports and imports has increased in terms of dollars ($OMRT>OMPQ$) and remained unchanged in terms of the foreign currency ($OM=OM$).

The described situation based on a zero elasticity of the instantaneous supply corresponds to Professor Taussig's " *impact theory* " of foreign exchange rates under dislocated currencies. (*International Trade*, pp. 344–345.)

It corresponds more to the conditions of reality if we assume that the reactions on the supply side begin to take place after a trivial lapse of time: If it is not misplaced concreteness to transform operational time into clock-time, one may assume that the reactions on the part of exporters will start after no more than a few minutes—because at the higher exchange rates much money can be made by arbitrage in international commodities. More and more of the short-run elasticity of supply will come into play the more minutes, hours or days we allow to pass. A theory which does not concern itself with minute-by-minute oscillations of the market will neglect the instantaneous inelasticities and proceed to the elasticities of the short period.

SECTION II

7. The study of the elasticities of supply and demand is, thus, the core of the theory of foreign exchange rates. If, under our present assumptions, commodity imports are the substance behind the demand for foreign exchange, and commodity exports the substance behind the supply of foreign exchange, we have to turn to the conditions of the domestic demand for, and foreign supply of, our imports, and to the conditions of the foreign demand for, and domestic supply of, exports.

Let us begin with the *supply of foreign exchange*, that is the export of commodities. What determines the increase (or decrease) in export which is brought about by a certain rise (or fall) in the foreign exchange rate?

To be quite modern in the emphasis placed upon regulations, we may list in the first place the foreign restrictions which are directed against an increase in imports. If a quota had been established by foreign nations for all possible import articles and if the quota had been completely exhausted in all articles, it is clear that a rise in the foreign exchange rate cannot bring about any rise in our exports, and hence in the amount of foreign exchange. The elasticity in the foreign demand for our exports, that is to say, the elasticity of supply of foreign exchange, would be zero (or negative) above a certain rate. Below this rate the supply of foreign exchange would not be perfectly inelastic, because our exports can certainly fall below the limit set by quotas; below the critical rate there would then be numerous articles in which the foreign import quotas were not exhausted and, hence, in this range our exports would be allowed to rise and to fall as the foreign exchange rate rises or falls.

Tariffs at a given level play a different role. If a certain quantity of goods were sold under the given tariff and at a certain foreign exchange rate, a larger quantity could be sold if a rise in the foreign exchange rate made the goods cheaper for foreign buyers. If a considerable portion of the price paid by the foreign buyer in terms of his currency consists of a specific import duty, a rise (or fall) in the exchange rate will reduce (or raise) the price paid by the buyer only by a smaller percentage. The foreign demand for our exports will thus become less sensitive to changes in the foreign exchange rate. The role of the tariff is analogous to the role played by the foreign cost of transportation and distribution. The higher these costs the less sensitive is the demand to exchange rate fluctuations.

8. Foreign import restrictions are, as we have seen, factors influencing the elasticity of foreign demand for our exports. It does not need any detailed explanation when we state next that *the elasticity of supply of foreign exchange will be higher, the higher is the elasticity of the foreign demand for the articles which we export.*

But this is not all. The same or similar products may be produced also in the foreign country. The price of our exports is reduced (raised) for foreign buyers as the exchange rate rises (falls). The increase (decrease) in our exports will then depend, in part, on the reduction (increase) in output by the foreign producers. If the foreign supply, which competes with our exports, is very elastic, that is if their output falls (rises) much as our exports are offered at reduced (increased) prices in terms of their currency, our exports will increase (decrease) by relatively more. We can thus state that *the elasticity of supply of foreign exchange will be higher, the higher is the elasticity of supply of foreign products which compete in the foreign market with our exports.*

This second factor is rather important. It is this factor which may be decisive in making the elasticity of supply of foreign exchange a positive value (i.e. in giving the curve an upward slope from the left to the right) in cases where the foreign demand for the articles which we export happens to possess an elasticity smaller than unity. With an elasticity of demand less than unity the quantity of goods demanded would increase as the goods become cheaper, but it would not increase by the same percentage; the amount of foreign money spent on the goods would thus decrease. The elasticity of supply of foreign exchange would then be negative (i.e. the supply curve would be backward-rising from the right to the left). But if the lower price (in terms of foreign currency) at the same time reduces the supply from foreign competitors, enough business might accrue to our exporters to raise the amount of foreign exchange received for our exports. In short, even when the elasticity of demand, on the foreign market, for the *articles* which we export is smaller than unity, the elasticity of demand for *our* exports may be greater than unity if the supply by foreign rival producers is sufficiently elastic.

We must add that in all probability the elasticity of foreign demand for our exports (" our " stands for almost any country) is greater than unity. This is, at least, likely (*a*) where the export industry is in strong competition with foreign production (which would appear to be almost certain if the second country were the rest of the world) and/or (*b*) where goods which had not been exported become exportable at a higher exchange rate. This, naturally, means a high elasticity of demand between certain price ranges since, in those articles, sales increase from zero to a positive figure. Such articles are likely to exist everywhere—so that it would be quite mistaken to estimate the elasticity of demand for our exports by confining oneself to the actual export articles and neglecting the potential ones.

9. In order to export more the export industry must be capable of increasing the quantities supplied to foreign buyers. This will depend, in part, on the capacity of our export industry to expand its output, and, in part, on the willingness of domestic buyers of the exportable articles to forego its consumption as they rise in price. Thus, to the two propositions stated previously we add a third, namely that *the elasticity of supply of foreign exchange will be higher, the higher is the elasticity of supply of exportable articles*, and a fourth, that *the elasticity of supply of foreign exchange will be higher, the higher is the elasticity of our domestic demand for the goods whose surplus production is exported.*[1]

10. As we have stated, it is not likely that (barring trade restrictions of a certain type) the elasticity of foreign demand for our exports is smaller than unity; hence, it is not likely that the supply of foreign exchange is of negative elasticity within any " practical " range. (By

---

[1] To understand better the relationship between the last two statements, let us suppose, for a minute, that the supply of the commodity, part of which is exported, is absolutely inelastic. This means that no more can be produced, however high its price rises. The part bought by domestic consumers, however, will probably diminish as the price rises; it will diminish much upon a modest rise in price, if the elasticity of demand for this product is high. The exports of this good may thus increase even if its production cannot be increased.

"practical" I mean under conditions which are likely to be encountered in reality.)

Nevertheless, it is interesting to examine what would be the consequences of such a negatively elastic supply of foreign exchange. Let us compare the effects of an increased demand for imports under conditions of a positively inclined supply curve with those under conditions of a *negatively* inclined supply curve of foreign exchange. This is done in Fig. 2, where the supply curve SS'' turns backward from a certain point on.[1]

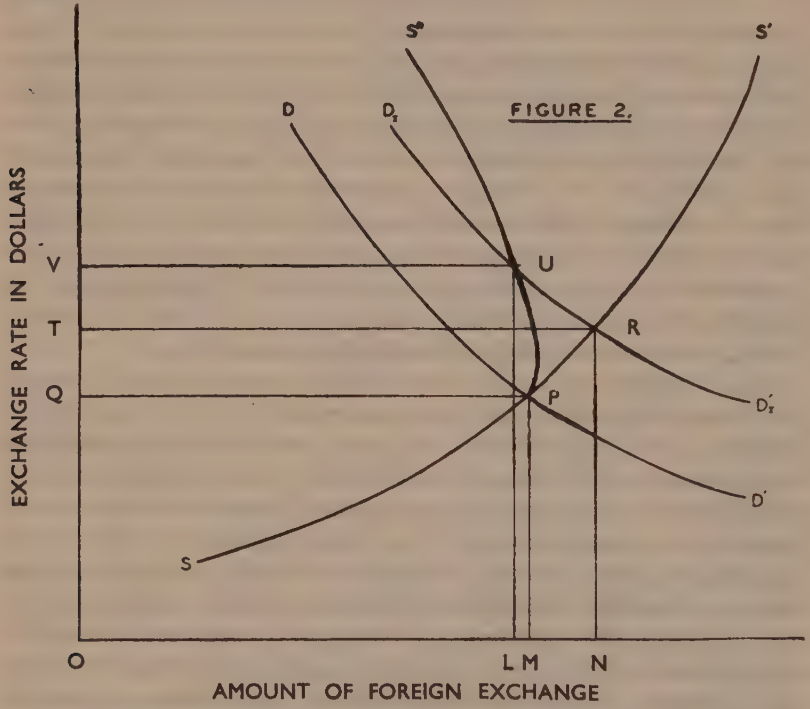


FIGURE 2.

Before the increase in demand for imports the foreign exchange rate is OQ; exports and imports amount to OM in terms of foreign exchange, and to $OMPQ$ in terms of dollars. If the supply curve is "normal", i.e. positively inclined (SS'), the increase in demand (from DD' to D_1D_1') raises the foreign exchange rate to OT, and raises exports and imports both in terms of foreign exchange (from OM to ON) and in terms of dollars (from $OMPQ$ to $ONRT$). If, however, the supply curve is " abnormal ", i.e. negatively inclined, the exchange rate rises to OV ; exports and imports fall in terms of foreign exchange (from OM to OL) and rise in terms of dollars (from $OMPQ$ to $OLUV$).

---

[1] The curve cannot rise backward more sharply. The slope of the negative inclination must at every point be greater than that of the rectangular hyperbola passing through that point. This is clear when we consider that, as the foreign exchange rate rises, the price of our exports is lowered only in terms of foreign currency, but not in terms of dollars. The dollar prices of the exports will rather be higher than before. The increased quantities exported may thus fetch reduced proceeds in terms of foreign exchange while the proceeds in terms of dollars are certainly increased.

Exports equal imports, of course, whether calculated in terms of dollars or in terms of the foreign currency. But while both exports and imports rise in terms of dollars, they fall in terms of the foreign currency, if the supply of foreign exchange is of negative elasticity.

11. In sub-sections 7 to 10 the conditions of supply of foreign exchange from commodity exports were examined. We turn now to an examination of the conditions of *demand for foreign exchange* for commodity imports. Most of the statements which will have to be made concerning the elasticity of demand for imports will be analogous to those made about the supply side.

The role of quotas is obvious. With quotas for all possible import articles and with all quotas exhausted, the demand for imports, and, thus, the demand for foreign exchange, must become perfectly inelastic below a certain exchange rate. Above this exchange rate demand will be of elasticities greater than zero.

The role of tariffs is no different than before. The greater the portion which specific customs duties are of the selling price of imported articles, the less sensitive will demand be to changes in the exchange rates. Hence the higher the tariffs the less will the quantities of foreign exchange demanded fall as the foreign exchange rates rise and *vice versa*.

Four fundamental rules linking supply and demand conditions for the imported articles to the elasticity of demand for foreign exchange can be stated as follows.

(1) *The elasticity of demand for foreign exchange will be higher, the higher is the elasticity of the domestic demand for the articles which we import.*

(2) *The elasticity of demand for foreign exchange will be higher, the higher is the elasticity of supply of domestic products which compete in the domestic market with our imports.* As, for example, the foreign exchange rate falls (because of an increase in the supply of foreign exchange, owing perhaps to an increased foreign demand for our products), foreign products become cheaper in terms of

dollars. If domestic rival producers will greatly reduce their output as prices fall, i.e. if their supply is very elastic, imports will rise even if the domestic demand for the articles concerned is (very or perfectly) inelastic. Likewise, even with an inelastic demand for the articles concerned, imports will fall sharply as the foreign exchange rate rises, if the domestic rival producers expand output readily as domestic prices rise.

(3) *The elasticity of demand for foreign exchange will be higher, the higher is the elasticity of supply by foreign producers of the articles which we import.* If, for example, a fall in the foreign exchange rate tends to reduce foreign prices in terms of our currency, imports would not be able to rise, in spite of our elastic demand for them, if foreign supply were perfectly inelastic. The selling prices of these foreign products in terms of their own currency would rise so much as to offset the price reduction which the lower exchange rate would imply for our buyers in terms of our currency. Statement (3) has, however, to be qualified by the fourth rule.

(4) *The elasticity of demand for foreign exchange will be higher, the higher is the elasticity of the foreign demand for their own products.* If, for example, foreign producers are not capable of expanding their output, as our demand rises, and if therefore the prices of their products in terms of foreign currency rise, this may induce foreign domestic buyers to forgo the purchase of these goods, thus releasing them for our disposal. Our imports can therefore increase even if foreign production cannot, a fall of foreign consumption providing the goods whose production seems to be fixed.

Likewise, even with an inelastic supply by the producers of the articles concerned, imports will fall sharply as the foreign exchange rate rises, if foreign home consumption expands readily as prices in their country fall.

12. The reader with a sense for symmetry will now expect a digression on the possibility of negative elasticity of demand, i.e. of a backward falling demand curve. Nothing of this sort is in order, unless we wish to enter into perfectly absurd theorising about imports being sufficiently affected by prestige values of imported luxuries.

The lack of symmetry is only a seeming one, resulting from the properties of our curve analysis. That the foreign demand for our exports is inelastic means that the amounts spent, *in foreign currency*, for our exports fall, as these exports rise in physical quantities owing to a higher exchange rate. That our demand for imports is inelastic means, in contrast, that the amounts spent, *in our own currency*, for our imports fall, as these imports rise in physical quantities owing to a lower exchange rate. Since our curves depict amounts of foreign currency by the values of the abscissa, a fall in these amounts, as the exchange rate rises, has to be shown by a backward rising supply curve. Since, in contrast, amounts of our own currency are depicted by the rectangular areas produced by abscissa and ordinate, a fall in these amounts, as the exchange rate falls, has to be shown by no " backward " turn of the demand curve but simply by a slope which is steeper than that of rectangular hyperbolas passing through the same points.

As to the question whether the demand for foreign exchange for import purposes is likely, in reality, to be of an elasticity smaller than unity, we must recall what was said above (in 8), on the analogous problem. One point which was emphasised there was the degree of competition. Elasticity of demand from the point of view of any particular *seller*, or selling country, is a function of the number of sellers, or selling countries, which compete for higher shares of the market. If the other country is larger than the own country, or, if the other " country " is the rest of the world, then it is highly probable that the share of our exports in the foreign market is small, and, hence, the elasticity of foreign demand for our exports is very high.

These considerations are not applicable to the problem of elasticity of demand from the point of view of any particular *buyer*, or buying country. Whether the domestic demand for an imported article is elastic or inelastic is not a function of the number of sellers ; here we are concerned with the total market demand, the elasticity of which depends on " tastes ", consumption habits, income, income distribution, etc. Even if the importing country is smaller than the other, or even if the other " country " is the rest of the world, there is nothing which would make us expect our demand for imports to be highly elastic.[1]

---

[1] One might think that the proposition advanced in the text hinges on the definition of " commodity " or " imported article ". If these terms were narrowly applied so as to regard special types, brands, qualities, etc., as separate articles, the demand for each " article " would naturally be more elastic the greater the number of near substitutes. This is, however, not

The other point used in the argument in favour of a high elasticity of foreign demand for our exports was the existence of potential export articles. This point is valid also in a consideration about the elasticity of our demand for imports. There are undoubtedly a number of goods which at a given exchange rate are not among imported articles but which might become imported articles if the foreign exchange rate were lower. Whether or not this circumstance is sufficient to make total demand for imports of an elasticity greater than unity, cannot be answered in general theory.

SECTION III

13. Commodity trade has been assumed to be the only source of demand and supply of foreign exchange up to this point. Imports of goods have been the substance behind the demand, exports of goods the substance behind the supply. We proceed now to including unilateral payments or long-term capital movements into our analysis. We still rule out invisible services, gold movements, and short-term capital movements.

Let us assume that a series of large payments is to be made from our country to the foreign country, so that there emerges a demand for foreign exchange which is not arising from a demand for imports. The purpose of the payments may be investment in the foreign country, or settlement of old debts, or a war tribute, or something of the sort. In order to obtain the aggregate demand for foreign exchange, we have to add the demand for foreign exchange of those who wish to make these payments, to the demand for foreign exchange of those who wish to import commodities. (That the latter demand is not likely to be the same as it would be without the non-trade payments will be discussed later.)

The purpose of the payments will, of course, have a bearing on the elasticity of the demand for foreign exchange. If it concerns the payment of a debt contracted, or a tribute imposed, in terms of our own currency, so that a fixed amount of our currency has to be used for purchasing foreign exchange, then the demand for foreign exchange arising

---

the same thing as the elasticity of the market demand as dependent or not dependent on the number of sellers of each " article ". Whereas demand as seen by each seller possesses greater elasticity the greater the number of sellers of the article, market demand as the aggregate of the buyers' demand schedules possesses an elasticity which is independent of the number of sellers of the article.

from this payment has an elasticity of one, i.e. the demand curve is a rectangular hyperbola. If it concerns the unpostponable payment of a debt contracted, or a tribute imposed, in terms of foreign exchange, so that a fixed amount of foreign exchange has to be purchased, then the demand for foreign exchange arising from this payment has an elasticity of zero, i.e. the demand curve is a vertical straight line—at least up to some point above which an increase in the price of foreign exchange would surpass the good faith or solvency of the payers, in terms of their own currency.

The amount of the payments is not fixed in either terms in case of investments in the foreign country. Apart from changes in expectations due to changes in the foreign exchange rate, it seems certain that the elasticity of demand for foreign exchange for purposes of long-term foreign investment is more than zero, and it may be also more than unity.

14. Let us assume provisionally that the emergence of the demand for foreign exchange for purposes of investment abroad (" capital export ") leaves demand and supply of foreign exchange arising from demand for imports and supply of exports unchanged. What are the probable changes in exchange rates, in imports, in exports ?

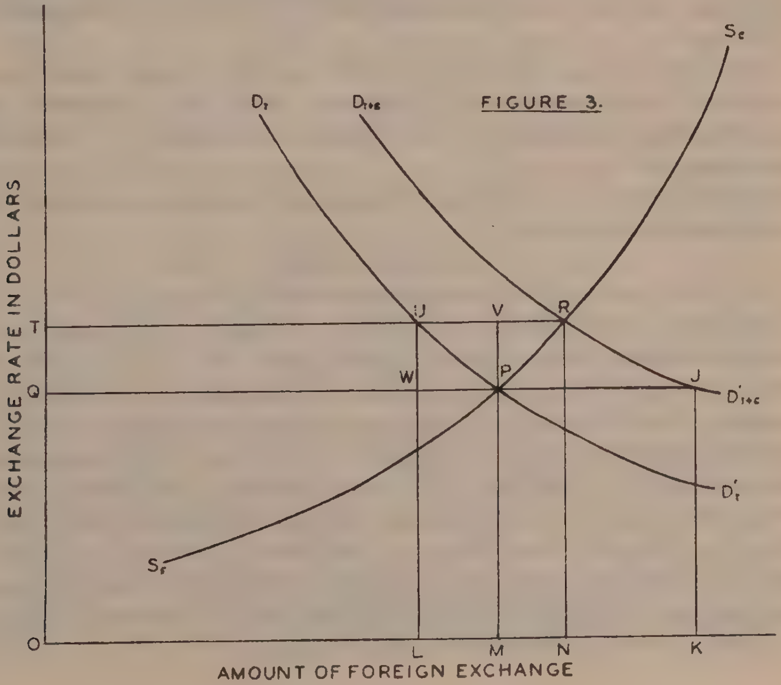


FIGURE 3.

For the accompanying graph (Fig. 3), the exchange rate would be MP or OQ, if demand and supply of foreign exchange were exclusively due to demand for imports and supply of exports. ($D_I D'_I$ and $S_E S'_E$); imports, in this case, would equal exports in terms of foreign exchange ($OM = OM$) and in terms of the own currency ($OMPQ = OMPQ$). If now the demand for foreign exchange of "capital exporters" is added to the demand for foreign exchange of the commodity importers, an aggregate demand curve ($D_{I+C}\ D'_{I+C}$), to the right of and above the first demand curve, would make an exchange rate of OQ impossible: the exchange rate will be driven up to MV or OT, where the quantities demanded and supplied are equal (TR or ON).

At this increased exchange rate capital exporters buy less foreign exchange than at the lower rate ($UR < PJ$), commodity importers buy less than at the lower rate ($TU < QP$), and commodity exporters sell more than at the lower rate ($TR > QP$). Who provides the foreign exchange (UR or LN), which the capital exporters take from the market? It is provided through an increase in the amounts supplied by commodity exporters (VR) and through a decrease in the amounts demanded by commodity importers (UV).

We see, then, that the capital export brings with it a decrease in commodity imports and an increase in commodity exports, all calculated in terms of foreign exchange.

Capital export = Fall in commodity imports + Rise in commodity exports.

$$LN = LM + MN$$

If these quantities are calculated in terms of our own currency, instead of in foreign exchange, the result is different in so far as the imports may not fall but rise, if the demand for imports is of an elasticity smaller than unity. In our graph, imports in terms of dollars, at the higher exchange rate, are higher than at the lower exchange rate ($OLUT > OMPQ$). We are therefore confronted with the fact that in consequence of the capital export, commodity imports may show an increase in terms of dollars but a decrease in terms of foreign currency. Statisticians, trying to "verify" a fall in imports due to increased capital exports, should beware of this trap.

On the other hand, the change of the trade balance to an export surplus is true in terms of both the own and the foreign currency.

Commodity Exports = Commodity Imports + Capital Exports
i.e. $ON = OL + LN$
and $ONRT = OLUT + LNRU$

The above results follow logically from our assumptions. If there are, among the international transactions, no (invisible) services rendered or received, and if there are no movements of gold or short-term balances, the balance of trade is uniquely determined by the balance of capital movements. The so-called "favourable" trade balance must be equal to the net capital export, and the so-called "adverse" trade balance must be equal to the net capital import.

15. "Invisible" exports and imports, that is the balance of services or "current items" (other than commodity trade) in the balance of international payments, can be introduced into our analysis without any difficulties. Demand and supply of foreign exchange arising from these services received from, or rendered to, residents of foreign countries, might be treated graphically exactly as we have just treated the demand for foreign exchange arising from capital exports.

We can easily imagine a demand curve for foreign exchange for foreign travel. The aggregate demand curve for both visible imports (commodity) and invisible imports (tourists' expenditures abroad) might look exactly like the aggregate demand curve in Fig. 3. The result of our considerations would, of course, be analogous. For example, if foreign travel were the only service item, the export surplus in the trade balance would be equal to the net "deficit" in the balance of tourist expenditures; or, conversely, the import surplus in the trade balance would be equal to the net "gain" in the balance of tourist expenditures. And again, an increase in the demand for foreign travel would lead to an increase in commodity exports and a decrease in commodity imports, in terms of foreign currency; and to an increase in commodity exports and a decrease or increase in commodity imports, in terms of our own currency.[1]

---

[1] If the possibility of a backward rising supply curve is to be accounted for, the last statement should read: "An increase in the demand for foreign travel would lead to an increase or decrease in commodity exports and a decrease in commodity imports in terms of foreign currency; and to an increase in commodity exports and a decrease or increase in commodity imports, in terms of our own currency."

It may be mentioned that some of the service items are complementary, while others are competing with exported and imported commodities; furthermore that supply and demand of foreign exchange arising from these current service items may be of all possible elasticities, ranging from less than zero to more than unity.

Some examples may be instructive.

(*a*) "Immigrants' remittances" to their relatives in foreign countries may be solely dependent on the remitters' budgets, or, on the other hand, solely dependent on the beneficiaries' needs; the respective demand for foreign exchange would be fixed in dollars, that is of unit elasticity in the former case, and fixed in foreign exchange, that is of zero elasticity in the latter. The elasticity would be between zero and one, if both factors bore on the size of the remittances.

(*b*) Interest and dividends received from foreign securities involve a supply of foreign exchange. If the amounts are fixed in foreign money, the respective supply of foreign exchange is perfectly inelastic; if, on the other hand, the amounts are fixed in terms of our own currency (which can be the case with special bonds only), the respective supply of foreign exchange is negatively elastic, that is to say, it is exactly minus one.[1]

(*c*) Payments for freight and shipping services sometimes bear a complicated relationship to the commodities imported and exported. If it is assumed that the foreign country has no merchant marine and that both exports and imports have to be transported on our boats, the supply of foreign exchange arising from these shipping services must necessarily tend to make our balance of trade "adverse". (Would that we might get rid of these nonsensical terms "adverse" and "favourable"!) If all commodity prices are fixed f.o.b. our ports, every import gives rise to a demand for foreign exchange, in payment for the goods, and a supply of foreign exchange, in payment for their transportation; and every export gives rise to a supply of foreign exchange received for the goods exported and another for their transportation. In deriving a supply curve of the foreign exchange which proceeds from shipping services, one is then faced with the difficulty that any change in the exchange rate may increase transportation in one direction but decrease it in the other. The supply of foreign exchange from shipping services is of "normal" elasticity only if the services of our marine compete with those of the other country (or, that is, of the rest of the world). In this case, a rise in the foreign exchange rate implies a relative cheapening of the services of our merchant marine in terms of foreign currency, and this would (in the case of competition sufficient to produce an elastic demand for the services of *our* merchant marine) bring our marine sufficiently increased business to secure increased proceeds in terms of foreign exchange, unless competing fleets lowered their prices to American ports.

---

[1] In other words, the supply curve would look just like a demand curve of unit elasticity (i.e. a rectangular hyperbola).

16. It is now time to drop our provisional assumption that the emergence of a demand for (or supply of) foreign exchange for purposes other than commodity imports (or exports) leaves the importers' demand and the exporters' supply unchanged. It may be well, however, to warn here against the possible confusion between demand (in the schedule sense), on the one hand, and quantity demanded, on the other.

The fall in commodity imports (in terms of foreign money) which was found above to be the necessary consequence of a new demand for foreign exchange by capital exporters, did not constitute a fall in the commodity importers' demand for foreign exchange, but merely a fall in the amount of foreign exchange demanded by commodity importers. The amount of foreign exchange demanded by commodity importers diminished because of the rise in the foreign exchange rate which was caused by the capital exporters' demand for foreign exchange. It represented a shift *along* the commodity importers' (unchanged) demand curve.

Now, we have to examine whether there may not be also a shift *of* the commodity importers' demand curve (and commodity exporters' supply curve), resulting from a new demand for foreign exchange for payments of any sort—such as capital exports, unilateral remittances, or payments for foreign services bought.

Let us assume an increase in demand for foreign travel. The persons who plan to spend an increased amount for their trip to the foreign country plan of course to spend a decreased amount of their budget for other things. Among these other things may be imported articles. (Instead of consuming imported foodstuffs here, the tourists will consume them abroad; thus less may be demanded to be imported.) What happens then is a shift of demand from imported articles to touring abroad. The increase in the demand for foreign exchange arising from tourists' expenditures abroad may, in this case, be partly offset by a decrease in the demand for foreign exchange arising from commodity imports. The offsetting is only in part, because the consumers' expenditures for the imported articles would have included payments for domestic services of distribution (services of the importers, wholesalers, transporters, retailers). Thus, not all of the amounts spent by the consumers on the goods in question constitute demand for foreign exchange, whereas after the switch of these expenditures over to foreign travel the whole sum goes into purchasing foreign exchange.

Some of the consumers' purchasing power devoted to foreign travel may have been withdrawn from buying goods which are exportable. The diminution of the domestic demand for exportable goods may easily induce the producers to look for more outlets in the foreign market, or, in other words, it may cause the supply of exports, and, under certain conditions, the exporters' supply of foreign exchange to increase. This would constitute a shift of the supply curve to the right and downward.

What has been said of the influence of the tourists' demand upon the importers' demand for, and exporters' supply of, foreign exchange, is similarly valid for other sources of demand for foreign exchange. We have to ask from what markets the purchasing power of those who now demand foreign exchange is withdrawn. In the case of capital export, where would the money funds have gone, had their owner not decided in favour of foreign investment? Have the funds come from an increase in voluntary saving, or from the usual flow of voluntary savings, or from disinvestment (omitted replacement) in home industry? Or have they come, perhaps, from idle hoards, or from bank credit expansion, in which cases no other demand is reduced by the increased capital export? This last possibility shall be ruled out for the moment. Only later shall we allow changes in the monetary circulation to be related to international transactions.

17. The shifts of the importers' demand and exporters'

supply curves due to the increase in tourists' or capital exporters' demand for foreign exchange, must not be confused with those famous shifts due to a " transfer of purchasing power " from the paying country to the receiving country. These are different matters which do not come into the picture before we get to international movements of gold and short-term balances. At our stage of the analysis monetary circulation is assumed not to be affected by international transactions. Thus, an increased demand for foreign exchange by tourists does not involve a withdrawal of purchasing power from circulation but merely a change of the flow of purchasing power through the national economic system.[1]

Let us look again at our Fig. 3 and ask ourselves where the money spent by capital exporters for foreign exchange ($LNRU$) comes from and where it goes. The question " where it comes from " is, however, very loosely expressed; it should not mean the channels through which it has reached the capital exporters, but rather the directions into which it *does not go* because of the switch toward foreign investment. The answer will be different in the case of increased saving, in which the money is diverted from the market of (domestic or imported) consumers' goods; and different in the case of maintained saving, in which the money is diverted from the market of (domestic or imported) producers' goods. The other question, " where the money goes," can be accurately answered: it goes to exporters of commodities.

Without capital export or any other demand for foreign exchange by others than importers, commodity exporters get no more and no less than the amount spent on foreign exchange by commodity importers. ($OMPQ$ in Fig. 3.) When a demand for foreign exchange by capital exporters becomes effective, a greater part of the total money flow goes to commodity exporters. They get what is spent on foreign exchange by capital exporters plus what is spent on foreign exchange by commodity importers, though the latter amount may be greater or smaller than it was prior to the export of capital.

---

[1] The assumption that monetary circulation is not affected by transactions such as foreign investments is admittedly unrealistic, even if international movements of short-term balances are ruled out. Improved investment opportunities abroad would lead to dishoarding and to increased borrowing from banks. And even apart from this the change in the money flow would most likely involve some slight change in the income velocity of circulation. However, a clean analysis must first abstract from all these complications.

This reshuffling in the distribution of purchasing power in the national economic system makes it highly improbable that the original importers' demand and exporters' supply curves remain unchanged. The final direction of the shifts cannot be ascertained *a priori*. Although we have argued above that the increase in demand for foreign exchange by tourists or capital exporters or the like *may* lower the demand for foreign exchange by commodity importers, the contrary may be true just the same. The factors of production employed by the busy export industries may be willing to spend much more for imported articles than the tourists or capital exporters would have done—had they not become tourists or capital exporters. Thus the capital export may result in an increase in the commodity importers' demand for foreign exchange, whereas it can, of course, never result in an increase in the amount of foreign exchange demanded by commodity importers.

18. Before we proceed to introduce movements of gold and short-term balances into our analysis, a word on the "purchasing power parity theory" seems to be in order. This theory claims that the foreign exchange rate is determined by the ratio between the real purchasing power of the two currencies; the price levels in the two countries would thus be the independent variables, the exchange rates the dependent variables of the relationship.

We have avoided a discussion of the concept of "price levels" in our analysis so far, and we shall try to do without it for the rest. We emphasised, however, from the beginning that commodity prices must not be assumed as "given" because they may be affected by the international transactions themselves. Even for the simplest considerations not *actual* prices but *potential* prices, that is to say, supply and demand conditions served to explain the determination of foreign exchange rates. And we saw that without "inflation" or "deflation" in any of the countries concerned, the exchange rates between them could be changed through a number of events. The degree of the change, however, is always determined by the potential commodity prices, i.e. by the supply and demand conditions on the two markets.

Nothing is more capable of altering supply and demand conditions and, thus, the exchange rate of a country, than inflation. While changes in tastes, changes in productivity, changes in capital movements, etc., can change exchange rates somewhat (or even by substantial percentages), inflation in one of the countries can change the rates by huge multiples. It is for this reason that the explanation of very great changes in the exchange rates has to turn to the increase in monetary circulation, and to the subsequent changes in supply and demand conditions (loosely expressed: to the change in " price level ") as the causal factors. There cannot be a minute's doubt that the " balance-of-payment "-theory was all wrong and the " inflation "-theory essentially correct, when the vast movements on the foreign exchange markets were discussed in the first part of the twenties. The greatest possible increase in the demand for imports plus the greatest possible fall in the supply of exports plus the greatest possible flight of capital would not be able to produce the conspicuous exchange depreciations of that period—had it not been for the inflations; for these inflations a measure was devised in the form of " purchasing power parities ".

In this historical perspective, the purchasing power parity theory must be given full credit. It was important, at the time, to pronounce tersely: " Don't be so ridiculous as to hold the 'need for imports' responsible for the exchange depreciation, if it is only inflation which can account for the effective demand for these imports." But this must not blind us to the fact that changes in the foreign exchange market—less conspicuous, but significant enough—may take place without any preceding change in the monetary circulations and purchasing power parities of the countries concerned.

(*To be concluded*)

Ethics and Economic Reform

III. CHRISTIANITY

By Frank H. Knight

The bearing of its most generally accepted religion upon problems of social-economic reorganisation in a modern " Christian " nation is obviously a difficult subject to discuss objectively, or, especially, briefly. Not merely is it almost universally affected by emotional attitudes—" prejudices," religious or iconoclastic as the case may be—or by a more mundane prudential regard for religion as a supposedly vital element in social order. Even from a strictly scientific point of view, we confront virtually unanswerable questions as to the causal relations between religion and morals, or *mores*, or other controlling social forces in culture and conduct. The two difficulties overlap; for there is no doubt that the belief in religion as the foundation of morality, and of social order and peace, is itself held as a prejudice or a tradition far beyond any possibility of justifying it by social-psychological analysis. Many earnest scholars and thinkers who both profess to be Christians and are recognised as such, have considered the question whether modern civilisation is Christian, or if so in what sense, and have admitted themselves puzzled as to the answer.

But it remains an important fact that a large majority of the people living under West-European civilisation call themselves Christian in some sense of the word, and at least profess to believe both that moral progress since ancient times has been chiefly due to the influence of Christianity and that the New Testament writings (and/or the teachings of " the Church " based thereon) afford an answer, in principle, and in large part, to all the moral and social problems faced by mankind. It is the purpose of this article to subject this idea, especially the second aspect of it, to a brief critical examination.

Our thesis will be two-fold. First, we point out that the teachings of Christianity give little or no direct guidance for the change and improvement of social organisation, and in fact give clear *prima facie* evidence of not having been formulated to that end. On this point there is relatively little disagreement, even on the part of Christian apologists. It is indeed common for the promoters of nearly any " reform " to lay claim to the support of these teachings. But this may be explained by a desire to capitalise upon the esteem in which they are held ; and the wide divergence among movements for which such support is claimed is rather an argument against the view that the teachings really support any particular social change. Real differences of opinion—likely in fact to be more or less violent—arise in connection with the second part of the thesis ; this is that even indirectly there is also little to be found in Christianity in the way of moral principles or ideals which can serve for the ethical guidance of deliberate political action. The question whether any proposed measure is in harmony with the " spirit " of Christianity commonly admits of no clear answer or at least none of a sort which will be accepted by Christians as a solution for practical political issues. Indeed, evil rather than good seems likely to result from any appeal to Christian religious or moral teaching in connection with problems of social action. Stated in positive form, our contention is that social problems require intellectual analysis in impersonal terms but that Christianity is exclusively an emotional and personal morality ; and this, while unquestionably essential, does not go beyond providing or helping to provide the moral interest, motive or " drive " toward finding solutions for problems. This is not only a very different thing from furnishing the solutions or even indicating the direction in which they are to be sought, but the teaching that it does furnish solutions has results which are positively evil and decidedly serious.

* * * * *

As already noted, the first thesis is generally accepted, and it need not be discussed at any considerable length. There is relatively little in the Gospels or other New Testament "Books"[1] which seems to refer directly to politics or the general structure of social relations. But there is enough to make it clear that the intent of the teachings was to have these conditions accepted and recognised as "given" factors in the world in which individuals and groups have to live their moral and religious lives.[2] Besides the much quoted injunction to "render unto Cæsar the things that are Cæsar's," found in all three synoptic Gospels, there are even more pointed passages, such as the categorical command (in Matthew only) to obey the Scribes and Pharisees (though not to imitate their deeds!). The epistles repeatedly enjoin obedience and respect to political rulers, and command servants to be obedient and respectful to their recognised masters. This last injunction appears in at least a half-dozen places, in as many Books in the New Testament. The word for "servant" covers, if it does not specifically mean, slaves, and it is a familiar fact that the Church never condemned or officially opposed slavery. Slavery, and then serfdom (in numerous grades) gradually disappeared in Europe, for reasons various and obscure. Before the process was complete, the African slave trade, and the exploitation of slaves in European colonies (and in part in Europe itself) developed. The defenders of negro (or Indian) slavery found no difficulty in justifying it from scripture.

---

[1] Christianity is, of course, a "scriptural," or "book" religion. It goes without saying that some Churches or spokesmen for Churches claim divine authority to "interpret" the sacred writings, and that, in this case as in all similar cases, interpretation requires no long time to change fundamentally or even to reverse an original pronouncement. But since theologians rarely hold explicitly that the New Testament Scriptures have been superseded outright by the dicta of later authorities, we are justified, in a brief sketch, in limiting our attention to these. Moreover, consideration of the Catholic Fathers and Saints or of the great Protestant leaders would only enforce and intensify what is said as to the indifference or positive conservatism of the Christian doctrine on political and social questions.

[2] In this respect the political environment was placed on the same footing as the physical-natural; there is no more suggestion of transforming the former in the interest of greater fitness for a higher type of human life than there is of the desirability of transforming the latter through promoting science and technology, or medicine. And it is superfluous to note that the numbers and qualities of human beings were similarly taken for granted, as well as the general framework of non-political social institutions. Indeed, it is clear not only that to change these given conditions of social life is no part of the Christian's duty, but that he is enjoined against such activities and the critical attitudes which would prompt them. Such interests would distract attention from the real or "spiritual" values. Except for purely moral-spiritual attitudes and sentiments, "the world" expresses the will of God, or natural law; and if conditions are hard, this is presumably deserved punishment or at least useful discipline for the soul. As to political or economic revolution, the mention of such a thing is hardly less than sacrilegious.

The position of Christianity on all these matters is roughly that of the contemporary stoicism, particularly Roman stoicism, of the first Christian centuries. It is not asceticism, but rather supreme indifference, plus, perhaps, and to an uncertain degree, "faith" that "God will provide," that "all these things will be added unto" those who diligently seek "the kingdom of God and his righteousness". It should be noted that the whole spirit of the Sermon on the Mount is very different in the two versions we have, in Matthew and Luke. And in general, there is the greatest diversity in the spirit of the teachings as between the different Gospels and the other Books of the New Testament (chiefly Pauline writings); but such questions cannot be taken up here.

* * * * *

We turn now to consider briefly the "spirit" of the Christian teachings and its possible implications in the way of providing ideals which might serve as a moral leaven and indirectly work for the transformation of social institutions and relations, and ultimately furnish guidance for conscious social action. Passing over the limitless problems of disagreement among the sources themselves or among authoritative interpretations, and looking only for agreement on some ultimate essence, we undoubtedly find the latter (in so far as it is to be found) in the acceptance by students and by popular opinion of the "gospel of love" (*caritas*, *agapê*). This is embodied especially in the parallel passages on the "greatest commandment" in Matthew and Mark, and in the answer in Luke to the question what one must do to inherit eternal life. "Thou shalt love the Lord thy God . . . and thy neighbour as thyself". Loving one another is also the main theme of the teaching in the Gospel of John, and there is the famous pæan to love occupying I Corinthians 13, and further extensive documentation is familiar. If Christianity does not mean this, there is nothing that it can be said to mean. It is no doubt justifiable to take as either interpretation of the Great Commandment or an equivalent exhortation the "Golden Rule" of the Sermon on the Mount, found in closely parallel wording in Matthew (7 : 12) and Luke (6 : 31).[1]

In connection with the two texts suggested, the question, what is the spirit of Christianity (leaving the application to social reform for later consideration) becomes, what is the meaning of "love", or what do men want "others" to do to them.[2] The "love" doctrine, in the abstract, is certainly an appealing idea. It seems natural to believe that if people "liked" each other better, or enough, a large part of the problems which occasion strife, hatred and suffering in the world would not arise, or would not be acute. Conflicts of material interest would perhaps not arise at all, or at least would not matter so much, and envy, contumely, etc., could hardly exist. But the least critical examination in the light of facts will show that this view cannot be maintained. Even between friends in the narrowest and most ideal sense, conflicts of interest would by no means disappear; and while different in form, these do not necessarily "hurt" less than in the case of strangers.

---

[1] The wording in the King James version of Matthew is : "Therefore, all things whatsoever ye would that men should do to you, do ye even so to them : for this is the law and the prophets." It is worth noting that the final commenting clause which ends the verse is closely parallel to the verse in Matthew which follows the Great Commandment : "On these two commandments hang all the law and the Prophets" (Matt. 22 : 40). We are naturally concerned here only with the second part of the Great Commandment, which indeed Matthew tells us is "like unto" the first.

[2] In Luke, the question, who is my neighbour, is asked and is answered by the parable of the Good Samaritan. This may be briefly dismissed. In the context, the significance is uncertain, and any general implication is doubtful. Taken as an injunction to render humanitarian assistance to the helpless victim of a calamity, on the part of anyone in a special position to give aid, there is nothing distinctively Christian about it, to say nothing of any indication as to how laws ought to be made or society organised.

But the more serious question is, how far ideal friendship intrinsically admits of generalisation over, say, the population of a modern nation,—and, of course, it must ultimately be over the world, since, for a world religion, national boundaries have no moral significance. Considering love in terms of the Golden Rule, it is clear that men do not want from many "love" in the special sense of ideal friendship. If it is not a contradiction in thought that one might give the same quality and intensity of affection to all human beings, good, bad, and indifferent, to the most callous criminal or the farthest Eskimo or Patagonian as well as to one's "nearest," and still "love" any of them—if this idea can be formed, it is surely neither attractive nor helpful as a moral ideal. It would seem that a "Christian" who tried to practice such love would have no friends,—being in that respect like the famous economic man. He would not be human. Hospitality as well as friendship would lose its meaning, to say nothing of "love" in any accepted interpretation.

Such universal love quite clearly is not the meaning of *agapé* in the New Testament writings. It evidently refers to some intimate association, not to human relations in general. In most cases, perhaps especially in the Gospel of John and the writings of Paul, the reference is clearly to the "brethren" in the religious group. The material as a whole strongly suggests the fraternity idea, which is such a familiar and important phenomenon virtually throughout history and anthropology. Any attempt to universalise this attitude is obviously contradictory to its nature. We have to keep in mind that Christianity was originally a gospel or cult of "brotherhood," in much this sense, and only gradually became a world religion. Moreover, its message was first addressed to the lowly, the weak, and especially the politically helpless, living in a world where they had no outlook, no future, no " hope ". And the sex limitation of the concept, though not as extreme as in many other cults, can by no means be overlooked. In Paul's churches the women were distinctly silent partners. Again, an essential feature of the teaching was the conviction of the imminence of the " second coming " (*parousia*) and the establishment of the kingdom of God (or the Millenium). And even without this feature, the interpretation of Christianity as escapism, emphasised by Nietsche, unquestionably has a large degree of validity for the early period.

That the existence of affection, in the sense of the most intimate and ideal friendship, still leaves problems to be solved, is obviously true where there is any disparity of circumstances between the parties. Perhaps it is true in rough proportion as such disparity exists. The romantic ideal of friendship seems to apply primarily to comrades in arms, or partners in adventure of some sort, hence almost exclusively to men, and men in the prime of life. Much of it is bound up with the concept of chivalry, which historically is neither Christian nor European. (But it was no more Mohammedan in the East than it was Christian in the West.) Chivalry is anything but democratic or equalitarian; it involves superiors as well as " brothers ", and obedience as well as comradeship. The more prosaic but practically far more important modern conception of " live and let live ", specifically as regards tolerance of differences, in religion and politics and in opinions and tastes, is for the most part the product of commercialism, of business, and not of religion. This is certainly more constructive with relation to social problems than the ideal romantic or mystical brotherhood, in the religious or any other form.

The general idea that love is no solvent of problems or reliable guide to conduct is perhaps best brought out by relations within the family. Certainly no amount (or kind) of " love " answers or removes the problems of conduct in the relations between husband and wife. And this is more poignantly true of the relation between parent and child—as the difference in " circumstances " is greater. Deficiency of love surely is not the most common or serious source of family problems. Loving one's children does not tell how to raise them properly. The problem is rather that of loving in the right way, or expressing affection in the "right", meaning "wise", conduct. Very commonly it appears that the presence of love complicates the concrete problems rather than contributes to their solution. Love may certainly clash with science in connections where the verdict rightly lies with the latter.

The family relation is also the best illustration of the undoubted fact that we are under a moral obligation to treat in different ways persons who stand in different social relations to ourselves. We seem even to be bound to feel differently toward them, though an obligation to have a feeling also appears dubious under critical scrutiny. Passing over the whole question of the ideal of emotional relations between husband and wife, we consider only the relation of parents to children. The command to love one's neighbour as one's self may seem like a "hard saying"; but it is "nothing" in comparison with the obligation to love other people's children as one's own, as would be required by universal and undifferentiated or impartial love. This is not conceivably possible without destroying the private family and going over to some Platonic communism as the basis of social order—than which nothing could be more antagonistic to the accepted teachings of Christianity. And even if this were done, likes and dislikes within some kind of primary group appear to be quite inevitable. And in any case it is physically impossible to have organised social life with obligations diffused uniformly over the whole race without regard to nearness either of personal ties or functional connection.[1] It is clear that personal obligations depend on and presuppose some form of social organisation and that ideals of personal relations and feelings cannot be used as premises from which to deduce norms of change in the social order. Conditions of effective action in daily life and of material progress conflict with any idealistic dream of universal freedom and brotherhood—even if that were really ideal in itself. Universal love or friendliness is only one aspect, one value, in the formulation of the ideal society toward which we must try to move.

We turn for a moment to consideration of the Golden Rule ideal of doing as one would be done by. In most real situations, intelligent people know that the " other " not merely does not want what we would want in his place, but also that what he wants is not what is good for him, or for the world, and that to give it is not the right course of action. And this is true even in the case of face-to-face personal relations, before we get to the problem-field of how to organise society. The solemn fact is that what people most commonly want for themselves is their " own way," as such, or especially *power*. And the question whether anyone ought to have power must be answered with very little reference to his desire for it or his own (honest) opinion as to his fitness to have it. Indeed fitness seems to bear rather an inverse relation to desire—as Plato taught. The question of whom to love, and how, or specifically how to express love in action, under infinitely various conditions, is certainly not to be answered exclusively in terms of the desires or wishes of the " beloved ", though these are data which must be carefully considered. Love must be wise, and often stern. The New Testament scripture itself says that " whom the Lord loveth he chasteneth " (Hebrews 12: 6).

---

[1] The question of obligations bound up in the relation between employer and employee as individuals is of course particularly important in our world. One aspect of it will be mentioned later.

What men want of others, as a matter of fact, is a question somewhat difficult to discuss without seeming to be cynical or satirical. What most of us actually want from most of the rest of mankind is pretty largely to " mind their own business and let us alone ". And on examination, this is found to be by no means a mere manifestation of original sin. It is in fact very largely the moral ideal! But it is not love. On the other hand, it is like love in that it answers no questions as to the social organisation; for the whole content of minding one's own business also depends on the social organisation, and takes this as given. Yet it helps towards a correct statement of the ethical problem. It helps to make it clear that the ethical side of the problem of social reform is not a matter of personal feelings, but that on the contrary, as we shall further emphasise later, positive effort is necessary to keep moral emotion out of the discussion or keep it from playing a direct role. The social problem is a matter, first, of attitude toward the law or the rules of the social game as they stand at any place and time, and second, of attitude toward higher general cultural and human values as a basis for changing such an existing set-up. It is the second which is the social problem in the strict sense.

Before coming to that, however, a few remarks seem to be in place on the subject of personal feelings or emotions toward others. In the first place, the type of personal contacts and relationships which an individual naturally has, or as a matter of choice may have or avoid having, itself depends on the character of the social organisation. In any functioning social order, an individual undoubtedly has in some sense an "obligation" to be friendly toward others with whom he comes in any contact, and also to show special sympathy, compassion, and material helpfulness, on "appropriate" occasions. This is not the place for a detailed homily on that subject, but one or two further observations seem to be called for on the content which is to be read into the Golden Rule injunction to do as you would be done by, and presumably to feel correspondingly.

What we ought to wish for others is clearly what they ought to wish for themselves—with "due" regard for their actual opinions and feelings, of course. In this connection, the first general observation in order is in line with the principle of Puritanism—which is hardly suggested by the wording of the Gospels. Each person ought to want, and very largely does want, to stand on his own feet, to play his own hand, in accord with the rules of the game.[1] In this regard, it is clear that much of what is commonly said about "helpfulness" and "service," etc., is "mush", or worse. Not only does love, as concession to the other's wishes, often conflict with respect for the person himself, or with intelligent desire for his well-being; in addition, love of persons often conflicts with love of the higher values of civilised life. It is in this connection that the really subtle and difficult problems of moral conduct arise, and the great tragedies of life. Not all the persons whom society has to treat as enemies and whom individuals have to shun or oppose are morally odious.[2] It seems to be not merely impossible, but actually undesirable and unthinkable, that living should not to a large extent take the form of contest relations and be impelled by the competitive or emulative interest. This is overwhelmingly the nature of play, recreation or " free " activity and it is clearly a large factor in the ideal social order to convert work into play, or give to it the psychology of play as far as possible. This side of life seems not to be recognised in the New Testament at all, even in the Pauline and other letters, which are much more realistic and disposed to emphasise purposive action than are the reported teachings of Jesus. It is hard to think of sport or sportsmanship in connection with New Testament personalities or teachings. But sportsmanship seems to be the best that modern civilisation has produced as a practical and effective moral ideal or sentiment. In a contest, what each one is trying to do and wanting to do is to win. (This *means* to win in accord with the rules, though many are often willing to win by breaking them, by " cheating " !) Moral goodness toward an opponent in a game certainly does not mean " letting " him win, either openly or secretly (with possible exceptions of course).

---

[1] In this respect, the "Pauline" letters are often much more to the point. See Gal. 6 : 4, 5. "But let every man prove his own work and then he shall have rejoicing in himself alone, and not in another. For every man shall bear his own burden." It is true that verse 2 in the same chapter reads, "Bear ye one another's burdens, and so fulfil the law of Christ". There is, of course, no necessary contradiction. Even the Pauline writings which explicitly command men to work (even as a condition of eating! 2 Thess. 3 : 10) stop short of any clear injunction to economic efficiency or recognition of economic progress as a real good.

[2] "Love for the unborn" only partly removes such conflicts, even in an abstract logical sense; and it cannot be identified with personal love, and is more of a rationalisation than a reality. This meets the contention of those theologians who try to defend the Christian Ethic by *defining* love as identical with morality. It is fantastic to extend the concept to cover the moral urge or emotion as such; but even if that be done the whole intellectual problem of conduct is still left out of account. The facts may be brought out by asking any chance group

Moreover, it seems that helpfulness, in " material " or economic activities should ideally be mutual, as far as possible. Now mutual helpfulness is precisely the ideal result of economic organisation on the basis of free exchange. Yet the formal, and enforced, mutuality of the market is only a short first step toward the ideal society and, as must be emphasised on every occasion, it leads to ideal results only under ideal conditions, i.e., under the condition that the whole framework of economic relations is ideal, as well as the individuals who enter into these relations.

Viewed in the large and in ethical terms, what each and all should primarily help each other to do is to realise sound ideals of personality, which inseparably involves realisation of ideal social relations and institutions. But this again can only be done in the main by helping them to help themselves, together with striving co-operatively to provide the most favourable possible conditions of self-realisation. In

---

of Christians—say ministers—what should be done in regard to any public question. There will typically be no more agreement than in any other group from the same social and culture strata, or if there is it can usually be accounted for in terms of specific idols of the tribe ; and where economic analysis is involved the preachers and reformers of religious cast can be counted upon to advocate easy and pleasant-looking or romantically appealing solutions for hard problems. In practice, they are particularly given to advocating the programme of taking away (by force) from those who have and giving to those who have not ; and the pleasantness of this line of action is not at all necessarily a matter of pure love for the beneficiaries.

this connection, as already suggested, the most difficult of all the concrete problems is undoubtedly that of the "right" kind and degree of impartiality, and of partiality, to those who stand to "me" in any special relationship. It is evident that love of one's friends, and especially one's own children, is not unselfish and that the conceptions of selfishness and altruism admit of no simple definition. Even devotion to a cause, even a good cause, is often more or less selfish.[1]

* * * * *

A general view of the whole problem situation in society may be secured by adopting the standpoint of our earlier observation that in the context of reality and of relevance to reality, all discussion of moral values and conduct in the larger social relations must take place in two main stages. The first step in moral behaviour in organised society is to obey and to support the existing legal order. The first and presumptive definition of what is right in any doubtful case is the answer to the question What is the Law? And the law must be interpreted to include all generally accepted customs or standards which create "legitimate expectations" on the part of others.[2]

But the duty of conformity with law is only a presumption, and is valid only within limits. Often there is no law which clearly applies, or there is a serious question as to how far the law itself is "right". In so far as the individual feels compelled to pronounce that the law does not apply, or is wrong, the question of what is right behaviour becomes exceedingly complex and difficult. It is not simply a question of what the law ought to be. It may be one's duty to disregard and break the law, because the particular case is clearly exceptional for some reason, a situation which law could not practically be made to cover. (This, of course does not militate against the theoretical validity of Kant's principle of generality as the criterion of rightness.) To the question how far one should give the law the benefit of the doubt, because of modesty of belief or of the value of maintaining the legal order inviolate, there is no general answer. And whether the decision is to obey the law or to break it, one confronts the separate question whether to try to get the law changed. In general, the social problem is that of changing the law, including both tradition and the public and constitutional law, which is the legal machinery for changing the law itself.

---

[1] When both are reduced to intelligible meaning, the principle of the Golden Rule and the Great Commandment is substantially identical with that of utilitarianism. In the latter the only doctrine which was either intelligible or effective was that "each should count for one and none for more than one". (As we have already shown—in our discussion of idealism—the pleasure principle is either nonsensical or anti-ethical, and the same applies to the notion of "the greatest good of the greatest number".) When we ask in what *respect* each is to count for one or what is the content of the good, Bentham—especially in his economic writings—interprets pleasure to mean freedom, and this is also the best concrete interpretation of doing as one would be done by. Yet, interpreted in an absolute sense, it yields the social philosophy of Herbert Spencer! The limitations of this have been pointed out in our first essay (ECONOMICA, February, 1939) on Liberalism. Freedom is relative to actual wishes, which may be wrong, and also to actual endowment with power in every form, which may be inequitable, or wrong in other ways. Extreme individualism has no place at all for the "helpless" except through their moral or romantic appeal to the strong as individuals.

[2] This seems to be the practical lesson to be derived from Rev. Reinhold Niebuhr's strenuous preaching. See especially *Moral Man and Immoral Society* (Scribner's, New York, 1932). For example there may be no moral gain from the liberation of slaves by an individual master in a slave-holding society. The act might both make worse the condition of the individual slaves affected and strengthen the hold of the institution. It might well be more intelligent and more ethical to treat one's own slaves as humanely as possible and to work for gradual rather than sudden improvement in the status of slaves as a class.—But this is not often the way moral sentiments work in history! They tend rather to generate strife and war, as happened in America over the slavery issue—in contrast with Europe, however, where slavery was not tied up with conspicuous racial differences.

Thus our discussion brings us to the social problem as such, i.e., the problem of law making, which always means law changing, and in general means *legally* changing an existing law.[1] Society itself is properly defined as the legal order under which any group of people live. Any society is bounded by the area (along various " dimensions " of size and of kind and degree of sociality) within which people are actually subject to the same law. The area is not necessarily spatial or geographic, though this is now typically true for law in the formal or political sense. But any accepted rules of relationship among persons define a society as to extent, and as to the sense and the degree in which it is a society. Social problems, then, root in the brute fact that all organised relationships, or relationships of any degree of permanence whatever, imply a common recognition of rules, or an accepted pattern of action. It is an axiom of sociology that *human* beings, especially beings capable of discussion, could not possibly come into existence or continue to exist apart from a culture, or set of institutions.[2]

---

[1] Revolution, and even violent revolution, is not absolutely excluded. But there is an " almost " overwhelming presumption against it. (Cf. above on the consequences of the American in contrast with the European process of abolishing slavery.) And it is to be noted that " real " revolution, a profound and sudden change in the legal system of a country, is a thing which practically does not and cannot occur.

[2] Historically, beyond doubt, societies, which is to say groups of men living under some common institutional or legal order, " grew " ; they were not " made ". No doubt there was a gradual transition from association by animal instinct, physically inherited, to culture,

The point here, and the main point of this discussion of Christianity as a whole, is the negative one, that the Christian teaching not only has nothing to say about this whole problem-field of change in social organisation, i.e., about law-making and constitution-making, which involve institutional change, but that it positively diverts attention both from a correct view of the problem and from the fundamental facts of social life out of which the problem arises.[1] The spirit of New Testament Christianity (passing over the politico-legal activities of organised churches in later times—for which, incidentally, there is no scriptural foundation whatever) points definitely away from all matters of positive social action, whether thought of as compulsion exercised upon individuals, or merely as the rational adaptation of means to ends. As already noted, it has little if any bearing on the rational adaptive side of even the purely individual life.

Since all organisation involves more or less compulsion, Christianity may be said to point toward an ideal world in which all organised activity would be absent, a society of antinomian anarchism. Even the type of constraint involved in public esteem and disesteem in relation to "good manners", can hardly be admitted into the picture. And it is surely beyond argument that such a social situation implies the complete absence of even individual economic problems and activities, to say nothing of organised economic

---

transmitted by unconscious imitation ("ritual" in the broad sense) and then to conscious ordering of relations through law-making. But in the long stages of unconscious evolution there were no social problems in our sense. Whether the institutional pattern under which a group lived before becoming critically conscious of its institutions, as a system of constraint, should be called legal or not, is purely a matter of convenience in verbal usage. Our point is simply that social problems come into existence when this critical consciousness develops to a certain point. And their content is institutional or legal change, advocated as desirable (not merely desired) and opposed as undesirable, in more or less rational discussion—or at least advocated as desirable by some part of the group, against resistance, perhaps through mere unthinking inertia, on the part of the rest of its membership.

[1] Categorical negations are not only undemonstrable in the nature of the case, in the field of social phenomena, but they are rarely if ever entirely valid. In this case, one certainly could not say that the teachings of Christianity have had absolutely no influence on the development of law in "Christian" countries. No doubt, moral judgments and principles which the law-makers and judges have supposed to be Christian teaching, or implications of Christian teaching, have played an appreciable role in guiding the activities of legislators and of judges in courts of record. Whether the sources were really and distinctly Christian, or are to be found in stoicism and natural-law philosophy, would be another question, and the main historical problem. It would be extremely valuable to have a careful study of the problem by competent theological and legal historians, particularly from the standpoint of the influence, first of the Roman Catholic canon law, and later of the Chancery and Equity courts, in the formation of our Anglo-American jurisprudence.

life.[1] Possibly it may be useful, in some very attenuated sense, to have such an ideal held up before the world for contemplation, with no indication of the character of organised action required to move toward the ideal, and with the apparent implication that it can be realised merely by admiring it or by acting as if it already existed. This seems very doubtful to the present writer, but the question may be arguable. Such an ideal, we must observe, would involve not merely material conditions of life categorically different from any that are possible for any biological species living on this earth, but also a race of " men "—if they should be called men rather than gods—having uniformly very different characteristics from any known or any possible human beings, the differences reaching far down into their biological endowment. The kind of " goodness " that would be involved is certainly not " good " for actual human beings living either in the actual world, or in the world as it can be imagined to become, as the result of any reasonably possible process of transformation, however long, by human agency. The social value of the role of parasitic saintliness in the real world is a question too long to argue, but the amount of it which can be defended as valuable, or which the world can afford, is certainly limited, and its value is highly indirect. It would seem that the situation is picturable in imagination only for disembodied spirits very different even from the " gods " of which we have anything like a concrete picture in any extant religion or theodicy. Certainly the deities of either the Greek or the Teutonic mythology would not fit into the picture.

The intellectual problem underlying any project of social reform or transformation, i.e., the " scientific " sociological problem, is in the first place the relation between good men and good institutions or laws. Within some limits, undoubtedly, the one implies the other, and either may result from the other ; better men will make better institutions, and better institutions will make better men. That is, the problem of action centres in the order of priority, or of emphasis on the two lines of action, preaching or educating and legislating. Perhaps the first phase of the question to be distinguished, approaching it from the standpoint of Christianity itself, is that of how far it is possible to perfect human nature simply by preaching good will, by "converting" individuals.

---

[1] On the other hand, it would be wrong to assume that if all economic problems (in the ordinary meaning) ceased from troubling, a " Christian " social order would become easy. A little reflection will show that any group activity,—in play or the pursuit of culture, as well as in " work " (even in psalm-singing !) involves power relations and differences in status. The " politics " of organisations in these other fields, and specifically in churches, do not actually differ significantly from the politics which relate to economic relations and problems—or they seem to be worse as often as better.

Logically prior, however, to the problem of action in the concrete sense, is always the problem of deciding upon the results to be achieved by action. This is the problem of formulating ideals, the particular problem which these essays are written to emphasise as an intellectual problem. It is not even seriously discussed in most of the talk and writing about social reform, and it is no wonder that utter confusion reigns with respect to it. Recognition of the problem of ideals as logically prior to the problem of action does not in the least imply that it is necessary to have a detailed picture of the ideal society, the ultimate goal of action, agreed upon and blue-printed in advance. On the contrary; in the writer's view, all activity is more or less explorative. Perhaps no proposition about purposive behaviour needs more emphasis than the fact that goals of action are probably never completely foreseen when the action is begun or decided upon. A certain element of uncertainty as to the result of action, a certain amount of curiosity as to what the result is to be, seems to be a necessary factor in motivation. The end is always more or less redefined in the course of the action itself, and an interest in this process of redefinition is inherent in the interest in action. The end or ideal which functions in advance of action is rather a sense of direction than an end in the concrete sense. Moreover, there seem to be no ends which are really final (no "*summum bonum*" in the classical sense) or which are not more or less consciously recognised in advance as means to further ends, and as becoming means to the extent that they are realised.

But on the other hand, ends, even in the proper limited sense of a direction of change, are not simply fabricated by creative thought. They arise out of the criticism of what is, and rational reflection on the possibilities of improvement. This means that the question of ideals takes the form of "sound" criticism of the existing situation, and hence that a logically still prior requisite is knowledge, including understanding, of what the existing situation is. This is especially important not merely because all activities looking to change begin " here and now," but because they must operate entirely on the basis of means (in the most general sense) which themselves exist as a part of the existing situation. All these knowledge data are rather a part of the process of formulating ideals than temporally prior or prerequisite.

In Western culture in our own day, the criticism of what is and the proposals for change of a reconstructive sort, have come to centre very largely on the economic organisation of society. From the standpoint of the intelligent student of the problem of reform, this fact is itself one of the essential features of the existing situation. And it becomes in a sense the " very first " step to inquire into the validity of this belief. This is particularly important because relatively little objective examination is necessary to show that the belief that life is to be transformed for the better by changing the economic system, has only a very limited amount of truth.

This fallacy is a feature in the confusion of prevalent " common sense " assumptions about the social problem. It is at least closely related to the doctrine of the " economic interpretation ", the falsity of which has received brief consideration previously.[1] It could be argued along several lines that the Christian teaching is more or less responsible for the spread of this idea, especially in the sense that it is undoubtedly in part a reaction from the indefensible notion that economic facts and interests are of no real or moral importance.

In the present connection we can only sum up the situation very briefly by pointing out that a rational attack upon the problem of social change is to be envisaged under three main heads or topics which in a sense are largely steps to be taken in the order indicated, but in a deeper sense are aspects of one process. The first topic, or step, must be the understanding of the " existing " economic situation, especially the mechanics of organisation of the enterprise economy (usually miscalled " capitalism "). As pointed out in our first article, on Liberalism, this inquiry itself again necessarily falls into two steps or stages, the understanding respectively of the general theory of such an economy, and of the divergences between the concrete reality and the theoretical picture, with the reasons for these divergences. As was also previously emphasised, this analytical order of attack is practically necessary because the first question of policy looking toward change is whether the undesirable features of reality are inherent in the general principles of the system or are primarily due to the divergences, and consequently whether the main principle of policy must be to make the system " work " more in accord with the analytical theory, or to replace this general type of organisation machinery with another type embodying different principles.

---

[1] See " The Ethics of Liberalism," ECONOMICA, February, 1939.

The second " stage " in the analysis is the formulation of ideals, and in the first instance ideals of economic relations, and choice of directions of change, though this process cannot be carried very far ahead of the exploration of possibilities. The real difficulty is that the notion of possibility cannot be taken relevantly, if at all, in a strict yes-or-no sense. It is rather a matter of costs, and costs again are measured by values, or ideals. Thus we are plunged at once into the third aspect of the problem, or stage in the analysis, the problem of the means or processes of social change, meaning conscious (social) self-change or self-determination. Change must obviously be taken in a transitive and active sense, or the discussion has no meaning at all. There is literally no " sense " in arguing purely in terms of causal analysis, either that changes in one phase of culture are treated as independent variables and regarded as " causing " changes in other phases, or more generally that an antecedent state or condition of culture as a whole causes or determines its subsequent state or character as a whole, from moment to moment.[1] We have to assume that there is real action, initiative, on the part of " individual minds ". Moreover, all action has to be pitted against a resistance of some sort to be thinkable. As already suggested, a social problem originates either in a difference of opinion—not merely of interest—between different members, or groups of members of the society itself (either as to the end of the change or as to some detail in the process) or at least in an opinion on the part of some member or members that change is desirable (not a mere desire for change) ; and the effort to effect the change must be resisted at least by " inertia ".

If we consider the economic aspect of society as the main field in which problems arise and change is called for, we face two main questions. The first has to do with the way in which the individuals who advocate change can act upon economic relationships. This suggests the alternatives already mentioned, that they may act either directly as individuals—in their own economic conduct, and by influencing the economic conduct of other individuals, through moral and intellectual persuasion—or they may act through the politico-legal organisation of society, by changing the laws and/or the methods of enforcement. For the most part it is, of course, the latter method which is chiefly in point (whatever ought ideally to be the case). The immediate question then is one of the efficacy of law in changing men's economic behaviour, either by its very existence or through the machinery and process of enforcement. This refers chiefly to the " criminological " machinery of punishment, though the use of rewards may also be an important possibility.[1]

---

[1] It is doubly nonsensical, proceeding from the standpoint of economic problems, however defined, to adopt the economic interpretation of history, i.e., to take the economic phase of social life (defined in the same way) as the independent variable which causes or determines everything else.

More generally, the problem of culture mechanics is that of the possibility of acting—meaning the ability of the proponents of action to act—either by preaching or by legislation, upon the economic side of life without at the same time affecting other phases or elements in the social and cultural life. More accurately, it is a question of social action that will effect a *net* improvement, an excess of good over evil in the economic sphere considered by itself, and either without affecting other social-cultural values, or without producing in other spheres a net damage which equals or exceeds the gain in that of economics. Even a summary outline of the main items of probable gain and loss through various possible measures of social action, in the economic sphere itself and in other spheres, would far exceed our space limits here. It should hardly need to be emphasised that as Bentham perpetually urged, there is a heavy *onus probandi* against legislative action, which is an intrinsic evil, because it involves compulsion, and also entails moral as well as material costs and uncertainties in enforcement. This is particularly true because the compulsion must always be administered by human beings politically selected and operating in a political setting, and—perhaps practically most important of all—because it tends in numerous ways to strain the resources of government, which are limited, particularly those of free government, and need to be conserved for indubitably necessary and possible tasks.

---

[1] The working of reward and punishment is formally equivalent to exchange and a notion of equality or equity obtains in both. But we do not think of the imposition of a specified fine for being drunk and disorderly as an offer to sell the privilege for that amount! The psychology of exchange is very different from that of punishment even when both are in the hands of the state.

Perhaps the feature of the situation which most calls for emphasis, because it is certain to be inadequately considered, is the general fact that any economic legislation—even if it were wise from its own point of view, which experience gives little ground to hope for!—inevitably has widely ramifying and serious effects on other phases of culture and social relations. This is particularly vital in connection with the family as an institution. On one hand, it is in the family system that the problems very largely arise, because, as merits constant reiteration, it is through the family that the "individual" comes into being and acquires most of his economic endowments and characteristics—because, in short, an individualistic system is necessarily very largely familistic and not individualistic in a literal sense. But at the same time, it is also through the family that the individual becomes what he is in all other respects and that culture in general is perpetuated. The economic individual is not really an individual, for the purpose of any social action, not even the administration of the crudest and most essential features of the criminal law. Any possible action by political society upon its members as economic units involves some transfer of functions and of responsibility from the family to the state and tends to aggrandise the latter at the expense of the former, and morally, to weaken both. As already suggested, what we carelessly call egoism is in reality as much family egoism as it is individual; the basic conflicts of interest lie as much between families as between individual persons.

One of the most appealing economic reforms is the reduction of the "artificial" advantage or disadvantage in the competitive struggle which individuals receive through the "accident" of birth. (And, we should add, through either the "accident" of marriage, or the influence upon marriage of economic status and prospects of prospective or possible partners in that relation.) Inherited handicaps can be dealt with to some extent by such measures as inheritance taxation on one hand and by the provision at "social" expense of educational opportunity—and conceivably also other elements of a fair start in life—on the other. But all such measures are subject to limits and to grave dangers if carried to extremes, unless we are prepared to contemplate the abolition of the private family altogether and the establishment of some kind of Platonic or ultra-Platonic communism. (This idea is no less un-Christian because Plato is supposed to have intended his proposal of property and family communism only for the governing classes of a society stratified almost to the ideal of caste.)

* * * * *

The teachings of Christianity, as a basis for the discussion of ideals for the guidance of economic reform present in the first place the same general and essential weakness or defect that was emphasised in the discussion of liberalism. They look at morality as a matter of ideal relations between individuals who are taken as given. But from the standpoint of any discussion of organisation, individuals are not given, and in fact are not really individuals at all. For the purposes of any formal or legal action directed toward rational change (in contrast with preaching), society is a thing of institutions far more than of men. And at the head of the list of institutions, transcending in importance all others combined, is the institution of the private family—or whatever institutions might take the place of the private family in any other type of social order.

It is to be kept in mind, too, that there are fairly narrow limits to the theoretical possibilities of replacing the family by any large-scale political unit. There seems to be no way of preventing any administrative group from being more or less of a "clique", and indeed, the matter of personal harmony in the staff is one of the primary features of effective administration or management in any enterprise. How far it is conceivable for the teaching of Christianity, and/or any possible educational system (whether itself based on the spirit of Christianity or on compulsory discipline, as the Marxists seem to contemplate) to reduce the importance of this factor, is an open question, as indeed is that of how far it is abstractly desirable to do so.

But the heart of the difficulty of Christianity as an approach is not merely in the fact that it ignores the concrete problems of the moral-legal order in any possible world of social relations conceivably realisable by any biological species living on the earth. It lies not even in the fact that the Christian type of moralistic teaching tends to distract attention from the real problem by clearly implying or actually saying that "love" would solve all these problems, or what is still worse, that it is practically possible to solve them by preaching love. The concrete effects of envisaging the problem in terms of any sort of individual rights or individual obligations to any other individuals, are positively evil in a more concrete sense. It implies—and as far as it is effective at all, tends to bring about—a social order which is definitely contrary to fundamental moral ideals, and not merely to our ideals but to the general character of moral ideals which is necessarily implied in the fact that they are discussed at all. The direct effects of "preaching" about economic relations and obligations are in general bad; and the kind of legislation which results from the clamour of idealistic preachers—and from the public attitude which such preaching at once expresses and tends to generate or aggravate—is especially bad. All this is the natural consequence of exhortation without knowledge and understanding—of well-meaning people attempting to meddle with the workings of extremely complicated and sensitive machinery which they do not understand.

The paradoxical results in real life can be sufficiently indicated by a little consideration of the worst concrete cases, namely, religious-moralistic pronouncements about the obligations of employers to employees, particularly in the matter of wage-rates. An adequate example is at hand in the doctrines of the papal encyclical *Quadragesimo Anno* of Pius XI in 1931. And the Report on Christianity and the Economic Order of the Oxford Conference of World Protestantism (non-Roman Catholic Christianity) of 1936, is similar; it is better, or not so bad, in that there is less of it in content and less self-confidence and authoritative dogmatism in the expression. The least familiarity with the "laws" of economics—a much abused term which properly means only the general *facts*—will show that any general pressure on the employers to pay wages appreciably above the market value of the service rendered is in the first place certain to be injurious to the interests of wage-workers—but more especially to those wage-workers who are already in the weakest position. The argument in proof cannot be elaborated here.[1]

---

[1] The writer happened to be invited to speak to a conference of liberal ministers in the early days of the "New Deal," and specifically of the N.R.A. One of the items on the programme of the meeting was an almost hysterical protest by a negro minister on the way in which the wicked employers were tending to replace negro workers with white as a consequence, or by

But even this is by no means the end of the evil that naturally follows from such ignorant if well-intentioned tinkering with the machinery of economic organisation. A very little, and very elementary, analysis would again show that the general implication and natural result of making the payment of wages in excess of the value of the service a moral or legal obligation of the individual employer is in the first place to establish a feudal or quasi-feudal relationship between employer and employee generally. But under modern conditions of technology and other factors involving wide (ultimately world-wide) economic relationships in production, exchange and distribution, such a feudalism is itself not generally or permanently possible. The natural political consequence of such interference must be either to segregate whatever elements in the population are not economically worth the wage set, and make them permanently wards of society, or else to cause the reorganisation of society itself under some kind of all-inclusive bureaucratic despotism. In the long run, the latter is much the more probable, or some combination of the two, involving much of the evil of both.

* * * * *

In conclusion: We come back to our initial contention that Christianity affords no concrete guidance for social action, beyond an urge to "do good and avoid evil"; and this is not Christian in distinction from any other religion, or from secular morality. The problem is, what is good, and what is evil, in political activity. In the first centuries of its history, the appeal of Christianity was to the lowly strata of society, not to persons holding any sort of power. The lowly were clearly exhorted to accept the existing structure of status and power relations, to obey constituted authorities, and not to try to "do anything about it". When persons in positions of power, and particularly rulers of states, came to be Christianised, they found little if anything in Christian teaching to guide them in the use of power.

them pretended consequence, of the legal fixation of minimum wages. It was, of course, entirely useless for an economist to point out to the assembled highly intelligent and liberal brethren that such results are in fact the inevitable consequence of such action, that in fact, given the action, replacement of inferior by superior employees is actually desirable; for if there is to be unemployment, it is better to have it concentrated on the least efficient. This is in the interest both of increased production and of reducing both the public burden and the amount of avoidable suffering and discomfort in connection with relief. All that they could see or imagine was that here were some unexpected detailed effects of the nature of evasion, to be met by further restrictions and more punitive measures of enforcement. They could not be envisaged as indicating anything wrong with the general policy.

There was no doubt an implication that they should be gentle and humane in the performance of their "duties"; but as to the content of these duties, it could only be inferred that they consisted in enforcing the laws, and perhaps gradually "humanising" them—whatever that might mean. Surely it was not their function to introduce any important changes into the political or social constitution.

By that time, however, the Christian movement itself had become highly organised along authoritarian lines, and the official interpreters of Christian doctrine regarded it as the first and main duty of the political authorities to support, and defer to, the authority and power of "the Church", i.e., of these officials themselves. And in performing this duty, political functionaries were by no means supposed to be either gentle or humane. At least, it was made very clear that heretics and blasphemers who did not promptly yield to admonition faced the most cruel punishments that could be devised, culminating in death by torture. In fact, the Church more and more demanded political power in its own right, to be exercised by its own administrative and judicial appointees.

In consequence, down to the time when the power and unity of the Western Church were broken by forces partly religious but largely secular, the meaning of Christianity for political action would be read less out of any moral pronouncements than out of the acts of the Church itself, in its courts low and high, and in its political and even military struggle for power. The general verdict of history is that, where its own power was not at issue, the policy of the Church as a political system was simply utilitarian, in accord with highly conservative standards. It may be argued that—again, where its own power was not in question—it was a humanising force, in some degree. But it certainly cannot be shown that the humanising of political power and of ordinary morals and manners went on more rapidly than would have happened under different religious conditions. It is not implied that the contrary can be shown; we do not know.

If we turn to the "scriptures", the one recognised source of Christian teaching now generally recognised as authoritative, it seems impossible to read into the text any exhortation to, or ideal of, rational efficiency, or progress, in any form. On the contrary, we find quite definite statements that such things do not matter. But we know, if we know anything, that if they do not matter, civilised or human life does not. For civilised life under mundane conditions simply cannot be pictured without quite extensive power relations between human beings, in addition to power over nature. A defensible ethic doubtless condemns overemphasis on power; but it must include both the right use of power and the quest of power—by right methods—for right uses. The concrete relation between amount and kind of power in both these senses and its various uses, and the quality of culture and of human life, measured in moral terms, is indeed a problem; but it is merely one of the most important phases of the general problem of social action on which the teachings of Christianity shed no light, or even tend to be definitely misleading. Indeed, with the possible exception of some aspects of face-to-face personal relations, scriptural Christianity gives no more guidance for individual action in fields where power plays a minimum role than it does for individual or social policy in relation to power itself. It makes no place for either the intellectual or the æsthetic side of life, or for either the appreciative or the creative aspect of either of these realms of value. By implication it condemns all these interests. The Church has indeed found a place for intellectual speculation and for art,—but only in the service of the religious life and of the Church itself, as an organisation, a power system.

Moreover, the practical result of the teaching, in connection with the material and cultural progress which modern history has exhibited, is paradoxical, morally disconcerting, and largely evil. In large part, religion seems merely to sublimate any moral urge which people have, giving it expression and release in more or less æsthetic ritual, and leaving them entirely free, except for an hour or so in the week, to pursue worldly objectives by worldly methods. And when the urge to action persists, and the "Gospel of love" ceases to mean merely a mystical, almost cabalistic, emotion among the lowly, a consolation for the lack of more substantial life advantages, a mental-spiritual escape from its evils and deprivations—and perhaps a formula for salvation in a future world, and when it comes to mean active love for the lowly and down-trodden on the part of more fortunately situated persons, it quite naturally tends to become both a gospel of hate toward the "privileged classes", and a conspiracy to seize and use power to effect a social revolution in which these classes will be " liquidated ". Thus, in good Hegelian style, extremes meet and antitheses blend. Not only does love turn into hate as the effective social attitude, and submissive renunciation of power into resort to violence, but the gospel of peace turns into a call to arms for the proverbially most brutal sort of war, civil war, class war. The tendency of Christianity to join hands with revolutionary Marxism is one of the conspicuous trends of the times, in countries where all social movements and public discussion of social problems have not been suppressed by a dictatorship, either of the (self-appointed spokesmen for the) exploited proletariat, or of the (self-appointed leaders of the) advocates of preserving civilisation —as the case may be. And in any event, as we have emphasised, the approach to problems of economic inequality and unfreedom (or what appears to be such) in terms of " moralistic " judgments of personal rights and duties, in the absence of careful economic and politico-legal analysis, is virtually certain to have consequences utterly different from the intentions of the reformers, and predominantly evil.

But it is usually easy for the Christian apologist to escape from any unpleasant implications, by alleging wrong interpretation of the meaning of the doctrine. It is perhaps better to leave this problem-field with the observation made at the outset that the actual role of religious professions and beliefs, to say nothing of religious " practices ", in the working lives of men is one of the profound mysteries of history and of social life. Indeed, mystery—or plain ignorance—seems to be the last word in the discussion of all the main elements in the political-economic problem. We do not know, either what are right ideals, or how the social-economic process works and what it can be expected to bring forth in the absence of interference, or how to interfere " intelligently " with its " natural " operation and development. At least there is little evidence of a consensus of the competent or unanimity in the mass on any of these main elements of the problem of reform. Only on that part of the second and third problems which is the subject matter of price-theory economics can it be said that any great headway toward satisfactory treatment has been made, and that is but a limited aspect of the total problem of action. Without an adequate ethics and sociology in the broad sense, economics has little to say about policy.

Rowland Hill and the Penny Post

By R. H. Coase

On August 17th, 1839, the Royal Assent was given to an Act which authorised the introduction of a uniform penny post in Great Britain. The reform was actually introduced on January 10th, 1840. This measure originated in certain proposals of Rowland Hill which were first made public in his famous pamphlet, *Postal Reform, its importance and practicability*.[1] It meant a complete change in Post Office policy. Whereas previously the charge for a letter had been based on distance,[2] inland rates of postage now became uniform for a given weight whatever the distance over which the letter was carried. Another change was that payment was now to be made by the sender, whereas previously it had been made by the person receiving the letter.

To many people, of course, the main feature of the new policy was the considerable fall in the rate of postage. In this paper, however, our main interest will not be the change in the average level of postal charges; nor will it be the change to pre-payment, which brought about the introduction of the postage stamp. Our attention will be directed to the uniformity of charge which resulted from the adoption of Rowland Hill's proposals. More than anything else, it was this which distinguished his reform from other proposals which had been made relating to the Post Office.

---

[1] A small edition, marked "Private and Confidential", was circulated to his friends and others he thought would be interested in January, 1837. A second and public edition was brought out in February, 1837. See the Preface to the second edition and *The Life of Sir Rowland Hill and History of the Penny Post*, by Sir Rowland Hill and George Birkbeck Hill, pp. 262–267. This work, which was the main source of information for this article, will be referred to as *The Life*.

[2] This was not the distance between the two places as the crow flies, but the distance over which the letter was actually carried by the Post Office. This even led to Post Office opposition to the introduction of cross-posts on the ground that it would reduce their revenues.

The adoption of a uniform postage in Great Britain had a very great influence. It led to similar action on the part of foreign Governments and to other measures, of which the Imperial Penny Post was one. Furthermore, the uniformity of charge has familiarised people with this method of pricing; it has become thought of as "reasonable"; and undoubtedly the demand for uniform charges over the country for, for example, the telephone and electricity derives its strength from the actual experience of uniformity in the case of the postal service. In this paper, an account will be given of the economic doctrines underlying Rowland Hill's proposals. They afford an interesting example of the deductive method being applied to the pricing problems of a State enterprise and for this reason they should be of interest to academic socialists.

Rowland Hill's Early Life

It would be difficult to appreciate Rowland Hill's views without some knowledge of his family, since he was greatly influenced by their strong Liberal traditions. It was their boast that, on the maternal side, they shared a common ancestor with the first wife of John Hampden. On the paternal side, they claimed alliance with Butler, the author of Hudibras. The immediate ancestors of Rowland Hill were not men or women of fame; but family tradition makes many of them suffer or triumph in the cause of freedom.[1] Rowland Hill's father, Thomas Wright Hill, was a remarkable man.[2] He had been employed in many businesses, but decided at the age of 40 to set up as a schoolmaster. Rowland Hill was then 7 and he became one of the first pupils. At the age of 12, however, he became a teacher in the little school.[3] Owing to his father's lack of system, he later took charge of the accounts and became in fact the real headmaster of the school.[1]

---

[1] See *The Life*, chapter one, for the tale of John Hill, the "honest juror"; of James Hill, who refused to vote for his squire and lost his supply of faggots; of another ancestor whose refusal to place his vote at the disposal of a rich brother-in-law lost them an inheritance; of Sarah Simmons, who left her home and fortune rather than marry her parents' choice. These tales were the pride of the family and it was in this atmosphere that Rowland Hill was raised. As his brother Matthew Hill said, they were "born to a burning hate of tyranny", see E. C. Smyth, *Sir Rowland Hill*, p. 9.

[2] He had an active mind, but seems to have lacked a sense of perspective. Among other things, he invented a short-hand and a system of proportional representation. During the Birmingham riots, he was one of a party which defended Priestley's house and an injury he received that night caused him to postpone his marriage.

[3] The school itself later became famous, largely as the result of a book entitled *Public Education*, written by Matthew Hill, assisted by Arthur and Rowland Hill, describing the system employed at their school.

There can be little doubt that it was his father who was responsible for his interest in political economy and his attitude to it. His father loved to discuss social questions, particularly " those matters that make up the life of a good citizen in a free state ".[2] He had early come under the influence of Priestley and was a Benthamite. A diligent reader of Adam Smith, Rowland Hill tells us that " He was in political matters always right. As long as his children could remember he was a thorough free trader. He condemned all laws against usury. He laughed at all social objections to the employment of machinery."[3] " Our whole family might be regarded as a little political economy club, sitting not indeed at stated times, but yet at short intervals, and debating, if not with much method, yet with great earnestness."[4] This was the atmosphere in which Rowland Hill was brought up, and as the quotation above indicates, he came to share his father's political views. In his discussion of purely economic problems, he shows a grasp of essentials which says much for the training he received.

At the age of 38, Rowland Hill decided to leave school-teaching and he became secretary of the South Australian Commission, a colonising venture with which Wakefield and Torrens were associated. It was while secretary of this body that he came to write his pamphlet *Post Office Reform.*

---

[1] There is a danger in this summary account that too little attention will be given to the attainments of Rowland Hill's brothers and to the help that they gave him. In the obituary of their father in the *Spectator* for June 21st, 1851, it is stated : " All the brothers, like their father, are publicly useful men ; and by a sort of confederacy of talent, accordance of opinions, and unity of sentiment, strengthen each other in their several departments." Whenever a difficult decision had to be made, a family council was called and Rowland Hill often benefited from their deliberations. He was the third son of a family of eight, six of whom were sons. The eldest of the brothers was Matthew, a lawyer, one of the first members for Hull in the Reformed Parliament, a writer on criminology and later Recorder for Birmingham. The next son, Edwin, was for thirty years Comptroller of the Stamp Department at Somerset House, a writer on currency and other subjects. The fourth son, Arthur, was always engaged in teaching and became the headmaster of the school. The next son, Frederick, was one of the first inspectors of prisons and was also a writer on criminology. Later he took an appointment at the Post Office to assist his brother Rowland. The last brother, Howard, died when only 25. His death was a grave loss to the family. His favourite study had been political economy and of him it is said that " He had read Adam Smith's great work as if it had been an attractive novel." Further information about this extraordinary family will be found in the *Memoir of Matthew Davenport Hill*, by Rosamond and Florence Davenport Hill, and *Frederick Hill, an Autobiography*. From this book I quote one last example to show what manner of family it was. It occurs on page 77. " The question of Parliamentary Reform had taken a firm hold of the public mind by the beginning of the year 1831. The period being one of national crisis, we held a family council to determine what action duty to our country called upon us to take. All agreed that one member should be spared from the work of the school and set at liberty to take an active part in the coming struggle. I was chosen for this purpose."

[2] *The Life*, p. 19. [3] *Ibid.*, p. 23. [4] *Ibid.*, p. 23.

POST OFFICE REFORM

I now come to a consideration of Rowland Hill's views on Post Office policy. It should be remembered that my chief concern will be his views on uniformity of charge. In the main, I follow his exposition in *Post Office Reform.*[1]

In 1835, there was a surplus in the general revenues and, says Rowland Hill, " we naturally speculated as to its application in the reduction of duties ".[2] Their thoughts turned to a consideration of postal charges and Rowland Hill settled down, with the aid of a quantity of blue-books lent to him by Mr. Wallace,[3] to study the problem. The results of his investigations were published in *Post Office Reform.*

He starts by drawing attention to the fact that reductions in taxation have affected the tax yield very differently. Even when the yield has fallen, the extent of the decline has varied greatly; in one case, coffee, a 50 per cent. reduction in the duty was actually accompanied by an increase of more than 50 per cent. in the yield. From this, he draws the conclusion that great care " should be exercised in the selection of the tax to be reduced in order that the maximum of relief may be afforded to the public with the minimum of injury to the Revenue ". He then goes on to say: " The best test to apply to the several existing taxes for the discovery of the one which may be reduced most extensively, with the least proportionate loss to the revenue, is probably this: excluding from the examination those taxes, the produce of which is greatly affected by changes in the habits of the people, as the taxes on spirits, tobacco, and hair-powder, let each be examined as to whether its productiveness has kept pace with the increasing numbers and prosperity of the nation. And that tax which proves most defective under this test is, in all probability, the one we are in quest of."

Investigation showed that the Post Office net revenue had certainly not grown at the same rate as the population nor at that of a similar duty, the tax upon stage coaches. Rowland Hill concluded that the tax on the transmission of letters should be reduced. To discover what reduction was possible, he argued that it was first necessary to estimate the natural cost[1] of conveying a letter and then to add to this a duty sufficient to produce the required revenue.

---

[1] I quote from the second edition. The page references are not given.

[2] *The Life*, p. 242.

[3] *Ibid.*, p. 246. Mr. Wallace was M.P. for Greenock and had concerned himself particularly with criticisms of Post Office administration.

As a first step towards finding the natural cost, Rowland Hill sought to discover the actual cost. He found that " the average cost of conveying a letter or newspaper, including the cost of collecting the tax, is, under the present arrangements, about 1⅓d." This sum, however, was probably too great since he thought that some expenses, the cost of the packet service, for example, were capable of reduction while other services were met by special charges. He decided first to confine his attention to the *apparent* cost of the *primary* distribution of letters, by which he meant " the transmission of letters, etc., from post-town to post-town throughout the United Kingdom, and the delivery within the post-towns ", and to neglect the cost of the *secondary distribution* or " that distribution which proceeds from each post-town, as a centre, to places of inferior importance ". He then finds that for the primary distribution the average cost is 84 hundredths of a penny, of which one third or 28 hundredths represents the cost of transit.[2]

He points out that the smallness of the cost of transit may occasion some surprise and then he goes on to give his famous example of the cost of conveying a letter from London to Edinburgh. This he estimated to be one thirty-sixth part of a penny. " *If, therefore*," he concludes, " *the charge for postage be made proportionate to the whole expense incurred in the receipt, transit, and delivery of the letter, and in the collection of its postage, it must be made uniformly the same from every post-town to every other post-town in the United Kingdom*, unless it can be shown how we are to collect so small a sum as the thirty-sixth part of a penny."[1]

---

[1] This he defined as " the cost which would be incurred if the Post Office were conducted on the ordinary commercial principles, and postage relieved entirely from taxation ". Another definition of the natural cost which was given was " the price at which competitors would be content with, if the carriage of letters was a free trade " (*Edinburgh Review*, January, 1840, p. 545).

[2] Rowland Hill goes on to point out that " the cost of transit will, under ordinary circumstances, be in tolerably direct proportion to the weight carried ; and as a newspaper or franked letter weighs on an average as much as several ordinary letters, the average expense of transit for a letter chargeable with postage is probably about one-third of the amount above stated, or nine-hundredths of a penny ".

In coming to this conclusion, it cannot be too strongly emphasised that Rowland Hill was speaking of the primary distribution. What plans had he for the secondary distribution ? " In the present state of things, the secondary distribution of letters is in some places a source of loss. This appears to me to be undesirable ; every branch of the Post Office ought, in my opinion, to defray its own expenses, although it is, at the same time, important that the ramifications should be as numerous as possible. The most equitable arrangement appears to be this : Let the whole weight of taxation be thrown on the primary distribution, which ought to include every place which can be reached without absolute loss to the revenue, and let each department of the secondary distribution just defray its own expenses.

" As some gentlemen, for whose opinion I have a high respect, think that letters should be distributed for the same charge in all districts, even where from the thinness of the population their distribution would be a source of considerable loss to the Revenue, I think it necessary to examine this part of the subject more fully.

" In the first place, it may be remarked, that a limit must be drawn somewhere. No one would contend that letters are to be distributed at the minimum rate over a district such as may be found in many parts of Scotland and Wales, and even in some parts of England, where people in the receipt of letters live two or three miles asunder. A system of secondary distribution must, therefore, be provided for. It may, however, be said, give a discretionary power to some one ; but a discretionary power lets in favouritism and error, whereas a self-regulating principle is a security against these evils. It would, perhaps, be some approach to a definite arrangement to say that all villages shall be included under the primary delivery. I very much doubt if any important village would, under economical management, be excluded by the principle which I advocate, from at least one delivery per day (and there could be no necessity for a double dispatch to small places off the direct lines of road). The question, however, is whether one part of the distribution shall be conducted at the expense of the other part?

---

[1] He goes on to add that " the expenses of receipt and delivery are not much affected by the weight of each letter, within moderate limits ; and, as it would take a nine-fold weight to make the expense of transit amount to one farthing, it follows *that, taxation apart, the charge ought to be precisely the same for every packet of moderate weight, without reference to the number of its enclosures* ".

"It is said that it is in the interest of society to make some pecuniary sacrifice for the purpose of sending the post into remote places; because, generally speaking, they are the less penetrable retreats of ignorance. As an abstract proposition this is undeniable; and by extending the post to every place to which it can be conveyed without *injury* to the Revenue, the principle would be to a great extent adopted; inasmuch as such an arrangement would throw not only all the tax on the more populous places, but all the fixed expenses of superintendence, etc.: but to attempt to go beyond this, would, as it appears to me, be sacrificing the interests of the more populous, without benefiting the less populous places. For if the charge be in all cases made uniform, it is manifest either that the revenue must suffer, or that the charge, as regards the large towns, must be advanced. If Government can give up the revenue, there is no difficulty in the matter; but if not, the adoption of this principle must lead to an increase in the charge on all letters. There is no eligible medium between a penny and two-pence, therefore the universal charge would become two-pence; but two-pence per letter, or a penny in addition to the primary charge, would, in all probability, suffice for the secondary distribution, as in very remote places there might be a delivery on the alternate days only, as at present. Thus, for the sake of uniformity, postage would be doubled to the whole community, when doubling it for the part only where the transmission is accompanied with increased expense would be sufficient to secure the revenue from injury. It appears, then, that the adoption of the principle under consideration would, as already stated, injure the towns without benefiting the villages."[1] He then went on to sketch a plan for secondary distribution. He thought this might be undertaken by local authorities such as the Guardians of the Poor, who could either make a charge on delivery for each letter or would raise the cost out of the parochial rates. Alternately, the Post Office could undertake it, making an extra charge on delivery. "If this plan were adopted, the central authority of the Post Office would be relieved of nearly all care with respect to the secondary distribution of letters; the frequency, and, consequently, the expense of which would in each instance be regulated in exact accordance with the wants of the district."

---

[1] This justification of his view that every branch of the service ought to meet its own expenses is not found in the first edition. There it was taken to be self-evident. It "ought certainly" to be so. In the second edition, this becomes "ought, in my opinion", while the long argument quoted above is added. There were clearly some among the supporters of the uniform penny post who did not advocate it because of cost considerations, and it is interesting to note that Rowland Hill was at pains to combat this view.

This then was Rowland Hill's plan. He argued that in the case of the Post Office, taxation apart, differences in prices could only be justified by differences in costs and that for the primary distribution, variations in distance affected costs to such a small extent that it would be fairer to charge a uniform price. Since, however, the cost of the postal service would be higher in certain districts than the receipts, he suggested a secondary distribution which was to bear an additional charge. His view was that each branch of the service ought to be self-supporting. Any other policy he thought to be "contrary to the true principles of free trade, as swerving into the unsound and dangerous practice of protection".[1] What he advocated was not uniformity, but uniformity in so far as it was justified by costs.[2] [3]

If these were his views, one might well ask why he did not advocate the abolition of the Post Office monopoly. In fact, he was in favour of this step. He tells us that "it implies the removal of an offence from our statute book, and the probable rise of a wholesome competition wherever the service is performed with less than the greatest efficiency and cheapness; a competition which, more perhaps than any other external circumstance, would tend to compel the department to have due regard to simple merit in its officers, and economic efficiency in all its arrangements."[4] He realised that there might be difficulties since the Post Office is forced, owing to Government policy, to serve certain districts at a loss, but he concludes: "Upon the whole, however, I am so impressed with the evils attaching to every monopoly, that I cannot but regard the abandonment in question, after due preparation, as a desirable step."[1] Although these were his views, it was fairly evident that an agitation to remove the Post Office monopoly was not likely to get Government support, while there was a possibility of inducing the Government to change Post Office policy. Besides, it was Rowland Hill's view that the Post Office was an undertaking which could be well managed by the State and he clearly hoped that many of the disadvantages of the Post Office monopoly would be eliminated by his proposals. None the less, it is important to remember that Rowland Hill favoured the abolition of the Post Office monopoly.

---

[1] *The Life*, Vol. II, p. 405.

[2] It is interesting to note, for example, that he wished Hampstead and Epping Forest to be in the secondary distribution.

[3] It must again be emphasised that I am dealing in this paper with Rowland Hill's views on the question of a uniform postage. His pamphlet contains many highly interesting suggestions relating to the management of the Post Office. His advocacy of pre-payment was, of course, of extreme importance.

[4] *The Life*, p. 405.

The Agitation for Postal Reform

I should like to consider briefly the way in which Rowland Hill's ideas came to result in the passage of the Act establishing uniform postage. Following the circulation of the first edition of his pamphlet, Rowland Hill had an interview with the Chancellor of the Exchequer but the Government were reluctant to support his plan. Soon afterwards, he received an invitation to give evidence before a Committee which was sitting to consider the London postal service. The report of this Committee gave him partial support, but in any case it was not acted upon. The publication of his pamphlet, however, brought him powerful support.

The Government continued to oppose his plan and the Postmaster-General of the day, Lord Lichfield, stated that "Of all the wild and visionary schemes which he had ever heard or read of, it was the most extraordinary". It was questioned whether the increase in letters carried would be of the order estimated by Rowland Hill and in any case there was doubt whether the Post Office could carry the additional letters.[2] In November, Mr. Wallace pressed for a Committee to be set up to examine Rowland Hill's proposals. This he obtained and was himself made Chairman. About the same time a Mercantile Committee had been formed which campaigned up and down the country on behalf of the uniform penny post. The formation of this Committee was mainly due to Mr. George Moffatt, a tea merchant, "who had made a fortune by the simple invention of selling tea to all retailers and dealers throughout the kingdom, at the uniform price of the market daily, by adding one halfpenny a pound to such price, as his profit".[1]

---

[1] *The Life*, p. 406.

[2] This argument drew the following retort from Rowland Hill in a letter to the press: "Without adverting to the means which I have distinctly pointed out for obviating any such inconvenience, I am sure that your lordship will not have much hesitation in deciding whether, in this great and commercial country, the size of the Post Office is to be regulated by the amount of correspondence, or the amount of correspondence by the size of the Post Office" (*The Life*, p. 294).

When the enquiry started, the chief witness was, of course, Rowland Hill. He was examined at great length about all aspects of his proposals, a large part of the time being devoted to the organisation of the secondary distribution. When, following his evidence, two Post Office officials were examined, the first stated that he did not understand the distinction between the primary and secondary distribution, while the second, who said he understood it, was unable to see its advantage. Rowland Hill, on the advice of his friends, then withdrew his plan for a secondary distribution and suggested that his proposals for the primary distribution be applied to all places to which there was a delivery.[2] In this way, the plan for a secondary distribution disappeared.

In the evidence, the objections to uniformity were few. Dr. Lardner, as perhaps befitted the future author of a work on railway economics, argued that price ought to be based on value, but this view found no favour at that time. The Post Office officials, in general, favoured uniformity; it would simplify their work and in fact already operated to some extent in the foreign posts. The main objections to Rowland Hill's plan were on other grounds. The practicability of payment in advance was questioned, while doubt was thrown on his estimates of the effect of a reduction in postage on the volume of letters carried. But a great deal of support was revealed in the evidence, much emphasis being placed on the effect of cheap postage on the life of the poor. When, however, it came to the deliberations of the Committee, the motion in favour of uniform postage was only passed by means of the Chairman's casting vote. The motion for a penny postage was actually lost; the Committee compromised, however, on a rate of 2d. Great pressure continued to be exerted in favour of a uniform penny postage. That it succeeded at last is itself a curious tale. The Melbourne Government, owing to radical opposition over the Jamaica Bill, decided to resign. Peel, however, was unable to form a Government owing to the Bedchamber Controversy. It was then, as the price of radical support, that the Melbourne Government decided to introduce the uniform penny post. "Thus one of the greatest social reforms ever introduced was, to speak plainly, given as a bribe by a tottering Government to secure political support."[1]

---

[1] Sir Henry Cole, *Fifty Years of Public Work*, Vol. I, pp. 35–36.

[2] "Some of his friends expected that the minor points would be laid hold of to raise a multitude of objections, and smother the great good. He very shortly saw this was likely, and withdrew from before the Committee his excellent plan for a secondary distribution. To all who are familiar with public meetings or debating rooms, it is known that the smaller the point, the greater the number of speakers . . . so with the Post Office officials and Mr. Hill's plan" (W. H. Ashurst, *Facts and Reasons in Support of Mr. Rowland Hill's Plan for a Universal Penny Postage*, 1838). It is easy to see that the merchants, bankers and politicians who were Rowland Hill's main supporters would not wish the plan to be jeopardised for what would seem to them a small matter. Cobden thought the plan for a secondary distribution a detail, to be settled when the main proposal was agreed. And as we have seen there were some among his supporters who were not in favour of this part of his proposals. Rowland Hill afterwards regretted the abandonment of the distinction between the primary and secondary distribution.

CONCLUSION

It is not my aim to discuss the history of theory relating to postage since the introduction of the uniform penny post in Great Britain.[2] I should, however, like to consider some of the results of this reform.

"In two-and-a-half years, the theory of a private individual became the law of the land; and efforts are making in France, Germany, and other countries, to introduce into their own systems the principle on which the plan is founded."[3] So wrote Matthew Hill. None the less, it is doubtful whether Rowland Hill's views have been well understood.[4] It is important to remember that uniformity was achieved largely because it was part of a plan which lowered rates of postage, while Rowland Hill's attempt to distinguish between primary and secondary distribution—a distinction which would have exposed clearly the rationale of his plan—failed. It is true that the idea that costs of transport represent a small part of the cost of a letter is fairly widely known. The fact that costs also depend on the number of letters carried and the density of the population (the basis of the distinction between primary and secondary distribution) is now largely ignored.[1]

---

[1] *The Post Office of Fifty Years Ago*, p. 24.

[2] For a discussion of this subject, see A. D. Smith, *The Development of Rates of Postage* (1917).

[3] In an unsigned article in the *Edinburgh Review*, January, 1840.

[4] McCulloch is manifestly unfair in his comment on "Post Office Reform" in his *Literature of Political Economy*. These views of McCulloch seem to represent a change of opinion. Rowland Hill tells us that he had "resented the delay in adopting my plan, had in conversation with myself, strongly condemned the Ministers, and threatened to expose them in the *Edinburgh Review*. The only circumstance to which I could attribute his change of opinion was that he had recently been appointed head of the Stationery Department. We all know, and I myself have been charged with such experience, that questions often assume a new aspect when viewed from the windows of a Government office" (*The Life*, p. 338).

The misunderstanding of Rowland Hill's position soon came. Jevons in 1874 is found to be protesting against arguments used in advocating uniform rates for the telegraph—and even for the railways! "Many people appear to have got a notion that there is some magical efficacy in low uniform rates, so that they are sure to produce a great net revenue. I can imagine no grounds for the notion except the great success of Rowland Hill's penny postage. I believe it is the false argument from analogy again, that, because the Post Office pays with low uniform rates, therefore telegraphs and railways must pay under similar regulations." And Jevons goes on to add: "It would be interesting to learn how many persons, who in the present day admire and discuss the results of Sir Rowland Hill's reform, have ever taken the trouble to look into the original pamphlet in which he demonstrates the practicability of a uniform penny rate. They would there discover that his scheme was founded upon a most careful and scientific investigation into the cost of collecting, conveying, and distributing letters. . . . He advocated a uniform rate mainly on the ground that it was more nearly proportional to *cost price* than any other which could be levied. . . ."[2]

The fact is, however, that when Rowland Hill's principle is referred to it is uniformity that is meant and not that prices should be related to costs.[3] At times, there has been a gross misrepresentation of Rowland Hill's views. Consider, for example, the following statement by Mr. R. J. Beadon: "When Rowland Hill decided to make the postage the same for a letter to Scotland as to the one to the next street in London, his calculation was based not only upon the large proportion of total costs assignable to terminal charges, but upon a general principle of 'making the good pay for the bad'. The millions of letters collected and delivered in London and other large centres at a high profit make up for those delivered at great distances and in outlying parts at little or no profit and often at considerable loss. This principle is still confined to the United Kingdom. It should be extended to the Empire. . . . Admit the principle, as it has been admitted since 1840, of 'taking the rough with the smooth', and there is no just ground for drawing a ring-fence round the United Kingdom and applying the principle there and there only."[1]

---

[1] Cf. *The Life*, p. 311. This is even true of Smith, op. cit. See, for example, Chapter 18.

[2] "The Railways and the State," in *Methods of Social Reform*, p. 369. Compare also the article "On the analogy between the Post Office, Telegraphs, and other systems of conveyance in the United Kingdom, as regards Government Control", in the same volume.

[3] If it is true, as Marshall suggests, that "The divergencies between charge and cost of service for postal services are indeed grotesque", this is clearly something of which Rowland Hill would have disapproved. The reference will be found in *Industry and Trade*, p. 428, note 1.

It seems to have been the opinion of Henry Fawcett, the only professor of political economy to become Postmaster-General, that it would be undesirable that prices and costs should be related. "He was always eager to improve the mail service to remote towns; and would observe that one good result of State management was the consideration of out-of-the-way places. A private management, he said, might probably have introduced a halfpenny post in London, and have left the country worse served than at present."[2] It is worth comparing this with Rowland Hill's view that the abandonment of the distinction between primary and secondary distribution actually had the effect of retarding the extension of postal facilities to out-of-the-way places. "As the additional charge would have repaid the cost of extension, the most ostensible as well as the most valid objection thereto would have been removed; and that development might have been rapid which was, in fact, lamentably slow."[3]

There is indeed good reason to deplore the abandonment of the distinction between primary and secondary distribution. It would have exposed the rationale of Rowland Hill's plan and might have led to a rational discussion of price policy and its relation to costs. As it is, the magic word "uniformity" has been substituted for thought.

---

[1] R. J. Beadon, *Uniform Imperial Postage*, p. 16. Mr. Beadon even goes so far as to criticise Mr. J. H. Heaton (later Sir J. Henniker Heaton), on the ground that he ignores Rowland Hill's principle of "making the good pay for the bad" (p. 49). Mr. Heaton, however, in advocating the Imperial Penny Post, states "That the principle of making each separate branch of the service pay cannot be, and is not, observed in the colonial, any more than in the home postal service, and that it is, in fact, inconsistent with the imperial idea" (*Imperial Penny Postage*). Mr. Heaton was a great protagonist of the Universal Penny Post and it was largely due to his efforts that the Imperial Penny Post was introduced.

[2] Leslie Stephen, *Life of Henry Fawcett*, p. 438.

[3] *The Life*, p. 253.

Ex-Ante Analysis and Wage Theory

By A. P. Lerner

Attempts to understand and make use of the concepts *ex-ante* and *ex-post*, as used by the Swedish school of economists, have never yet yielded me anything more useful than a headache, so that although I have long suspected that *ex-post* is an unnecessary prefix to the actual quantities and prices discussed in economics, while *ex-ante* is nothing but a more or less confused idea of a schedule which has not yet been completely emancipated from the idea of a *quantity* (or, less frequently, a *price*), I have been a little afraid that my suspicions rested on too subjective a basis. It was therefore very pleasant to find a clear justification of my suspicions in the work of no less an authority on the Swedish school than Professor Ohlin himself.

In an article[1] where he is simply giving an account of the Stockholm School and his own theory of saving and investment, *ex-ante* refers quite clearly to definite quantities (and perhaps also prices) and not to schedules at all. Thus Professor Ohlin says: "Let us now turn to *a comparison of the ex-post and ex-ante concepts*. Every one of the former has got a corresponding one among the latter,"[2] and speaks, e.g., of "the inequality of S_a (*ex-ante* savings) and I_a (*ex-ante* investment)". *Ex-ante* income, or investment or what not, is a definite quantity or value (or price)—the item as it is expected *before* it actually comes about. That is why it is called *ex-ante*. The expectation is liable to turn out wrong, so that when we see *afterwards*, or *ex-post*, what the item actually did amount to, we can measure the degree of error in the divergence between the *ex-ante* estimate and the *ex-post* actuality. I wish to stress that in this use *ex-ante*, like *ex-post*, refers to a single definite value of an item. Otherwise there would be no " correspondence " between *ex-ante* and *ex-post* concepts, nor could one speak of the equality or inequality of two *ex-ante* items like S_a and I_a.

---

[1] "Some Notes on the Stockholm Theory of Savings and Investment," *Economic Journal* (March, 1937).

[2] *Ibid.*, p. 64.

The difficulties of speaking of " *ex-ante* " quantities without getting lost in vagueness and ambiguities have often been pointed out[1] and these limit the applicability of the concept to very special and highly simplified models of economic behaviour. It can be used, for instance, with the "cobweb " diagram (Figure 1). Producers finding themselves

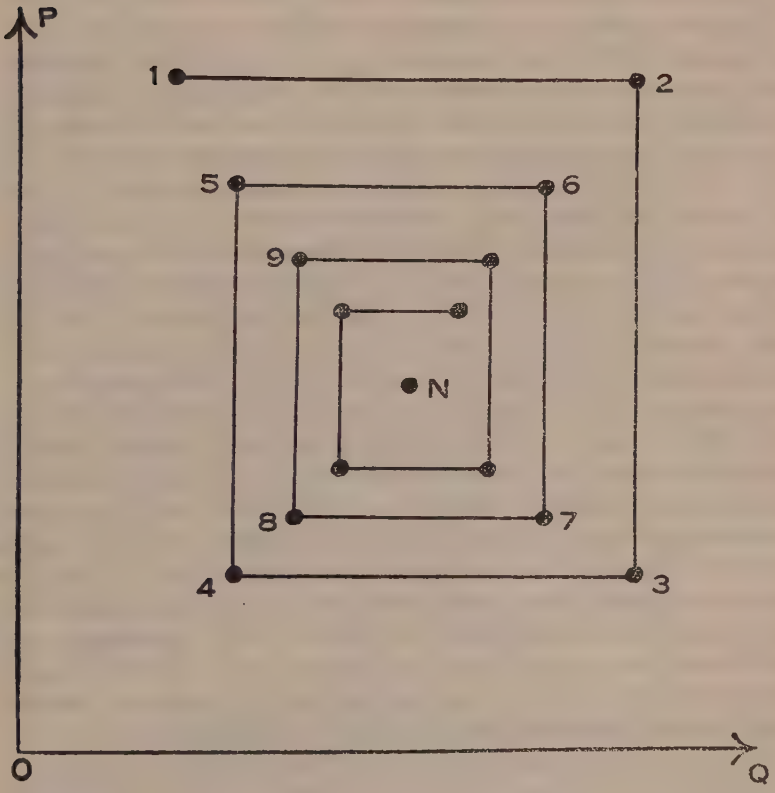


Fig. 1

---

[1] These are extremely well put by Mr. Hawtrey in the *Economic Journal* (September 1937), pp. 439–40.

in the *ex-post* position 1, expecting this price to continue, conceive of position 2 *ex-ante*. They produce the quantity corresponding to this, but the price unexpectedly falls so that *ex-post* we get position 3 instead. For the next period the planned, or *ex-ante*, position is position 4, but *ex-post* we get position 5 instead. This can go on, the even numbers showing *ex-ante* quantities and prices and the odd numbers indicating the *ex-post* situations. This may ultimately lead to an equilibrium (as suggested by the figure) or not, and indicates an approach at " process " or " dynamic " analysis. But in this form it can be applied only on the extremely narrow assumptions that have been examined by Dr. Lange.[1]

It needs very little inspection of Fig. 1 to see that the joining up of the odd numbers gives the demand schedule and that the even numbers lie on the supply schedule. This does not mean that *ex-post* is connected with the demand schedule in some way and that *ex-ante* is connected with the supply schedule. The odd numbers show actual or *ex-post* positions only because in the short periods to which these positions refer the supply curve is perpendicular so that *both* schedules pass through the *ex-post* positions. It is possible to reverse the relationship between the odd and even-numbered positions by reversing the implicit assumptions about the time lags. Starting from position 2, speculators, who know the shape of the demand schedule, will expect prices to fall, giving position 3 *ex-ante*, but as price falls output is unexpectedly reduced so that position 4 is an *ex-post* position, and so on. The even numbers appear to be *ex-post* now because we have assumed that the curve showing demand by speculators is horizontal, so that in the short period the even numbers lie on *both* schedules. From a long period point of view all the positions, odd and even, except *n*, are imaginary and therefore only *ex-ante*. But *n* is the long period *ex-post* position because both sets of *ex-ante* positions pass through it.

It should be noted that in the last sentence, if we put " equilibrium " in the place of " *ex-post* " and " schedules " in place of " sets of *ex-ante* positions ", we get a much more familiar proposition without changing the meaning. But this movement from *ex-ante* to schedules is somewhat anticipatory. At this stage of the argument it becomes clear first that there is not one definite *ex-ante* value that can be paired with each *ex-post* value, but that the *ex-ante* value, or the plan, depends upon where one starts. At the price of position 1 the *ex-ante* values are given by position 2 and so on.

---

[1] " Formen der Angebotsanpassung und wirtschaftliches Gleichgewicht," *Zeitschrift für Nationalökonomie*, 1935.

In a second article Professor Ohlin, after warning us that in this he may be going beyond his Stockholm colleagues,[1] has ceased to speak of *ex-ante* items as definite quantities that can be quantitatively compared with each other and with corresponding *ex-post* items. Now " the quantities each individual is willing to supply depend on the interest rates. In other words, the plans [i.e., *ex-ante* quantities] are in the nature of *alternative* purchase and sales plans."[2]

In this development the emphasis is shifted from the *anticipatory* or *forward looking* nature of *ex-ante* items to the fact that there is not a single value but several *alternatives* like the positions numbered in our Fig. 1, that only need joining together to show a *schedule*.

This process is completed by Professor Ohlin in a third article,[3] in which he has perhaps left his Stockholm colleagues far behind. There we read much more explicitly that " when it is said in price theory that the price of a commodity is governed by supply and demand, the meaning is that it is determined by the demand and supply *curves* which express the planned sales and purchases at different possible prices during the certain future period. These curves are *ex-ante* concepts."[4] " *Ex-post* we have only the point of intersection of these curves, *ex-ante* we have the whole curves which determine where the point of intersection will be."[5] And finally, " Anyone who refuses to accept this analysis of the pricing of claims must, I think, refute also the Marshallian supply and demand curve analysis in toto."[6]

What Professor Ohlin has done is to save the word *ex-ante* by emptying it of its original content, using it for the familiar Marshallian supply and demand curves analysis which nobody wants to refute, and leaving his Stockholm colleagues in the position of holding the baby. By this procedure he is enabled to have the best of both worlds. He can carry on his economic analysis with the accustomed supply and demand tools while wearing the outer trappings of the Stockholm fraternity. In this he is very much like those scientists with socialist sympathies who contrive to satisfy their scientific consciences while achieving ideological solidarity with superstitious communists by adding to their declarations of faith in Dialectical Materialism a footnote to the effect that all that the latter means is that the world is subject to change and that the omission of relevant considerations in any problem may lead to false conclusions.[1]

---

[1] " Some Notes on the Stockholm Theory of Savings and Investment, II," *Economic Journal* (June, 1937), p. 221.

[2] *Ibid.*, p. 224. The italics and the bracket insertions are mine. The word *ex-ante* has been dropped by Professor Ohlin except for the beginning of the paragraph, where this analysis is introduced as " a causal analysis which runs chiefly in *ex-ante* terms."

[3] " Alternative Theories of the Rate of Interest : Three Rejoinders," *Economic Journal* (September, 1937).

[4] *Ibid.*, p. 423.

[5] *Ibid.*, p. 424.

[6] *Ibid.*, p. 426.

Although I have not been able to obtain any results by the use of *ex-ante* methods, I would not like to deny that important service may yet be rendered by them. It does, however, seem clear, *a priori*, if not *ex-ante*, that they cannot be used to answer questions like " What determines the rate of interest in some sort of equilibrium situation ? " and that attempts to use them in this way must lead to failure or—as in Professor Ohlin's case—to the old method that is suitable for dealing with such a question being dressed up as *ex-ante* analysis. Its proper place is in the investigation of dynamic processes in terms of successive adjustments to new situations created by previous adjustments. One can be appalled by the inevitable complexity of such tasks, but one can raise no objection to the validity of the procedure.

There is, I think, a lesson to be learnt from Professor Ohlin's emphasis on the *ex-ante* nature of the Marshallian schedules. It may be considered as an antidote to the opposite weakness of paying insufficient attention to the schedules as indications of the forces at work in determining an equilibrium situation and concentrating too exclusively on the equilibrium conditions. There are many things on which a shift in the equilibrium may depend, and a failure to look at the schedules may obscure important considerations. A case in point is provided by Professor Pigou in considering recently whether a cut in money wages would increase employment.[1] Professor Pigou examines a suggested equilibrium position to see whether it really satisfies the conditions of equilibrium, and goes wrong in his analysis because he fails to consider the nature of the operating forces as they are shown in the relevant schedules. This procedure can be described as a concentration on the *ex-post* situation, or the conditions of equilibrium, while neglecting the *ex-ante* analysis of the nature of the schedules which determine what the equilibrium position (if any) will be.

---

[1] See A. P. Lerner, " Is Professor Haldane's Account of Evolution Dialectical ? " in the American *Science and Society* (Spring, 1938).

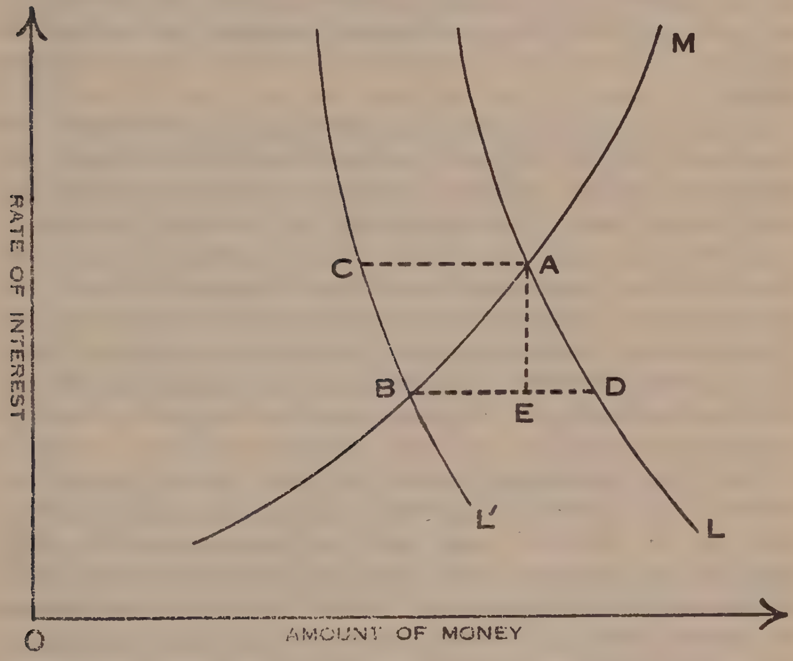


Fig. 2

The problem may be illustrated by a diagram (Fig. 2). Monetary policy is such as to make *M*, the supply curve of money available, slope upwards to the right. There is no investment, so that there can be no saving. *L*, the demand curve for money, slopes down towards the right for two reasons. (1) At a lower rate of interest the value of assets held (other than money) is greater (because of the lower rate at which the expected future yields of the assets are discounted to give their present value), while the cost (in interest forgone) of holding cash is lower, so that there will be a tendency to increase cash holdings to restore the equality between the marginal utilities of holding cash and other assets respectively. This may be called the *direct* or *liquidity* effect. (2) At a lower rate of interest the propensity to consume is supposed to be greater (i.e., the elasticity of demand for future income in terms of present income is supposed to be greater than unity), so that effective demand is greater, employment and output are greater, and the transactions demand for money is greater.[1] This may be called the *indirect* or *transactions* effect.

---

[1] "Real and Money Wage Rates in Relation to Unemployment, *Economic Journal* (September, 1937), Section II, pp. 407–11.

If there is a cut in the money wage, which is expected to remain indefinitely at the new level, the demand for money to hold at any rate of interest will fall in the same ratio as the wage; for there will be the same volume of *real* investment and income at prices reduced in the same proportion as wages and the value of assets will also fall proportionately together with their expected future yields.[2] This gives us the new curve of demand for money to hold, L', which is obtained by reducing all the abscissæ of the L curve in the same proportion as that in which the wage has been reduced.

The new equilibrium is at B. The rate of interest is lower. The amount of money is less in terms of itself by BE, but in terms of wage units it has increased by ED, since B at the new wage unit (or, roughly, price level) corresponds to D at the old. The increase in the amount of money in terms of wage units (ED) is absorbed partly in supplying the greater demand for liquidity, because the rate of interest is lower—the *direct* effect—and partly in satisfying an increased transaction demand because of increased income—the *indirect* effect. In the new equilibrium reached after a wage cut (which is expected to be permanent) there is a greater volume of employment.

From our schedules we can see that the increase in employment depends upon the increased propensity to consume, which in turn depends upon the reduction in the rate of interest. If the propensity to consume did not change with the fall in the rate of interest (i.e., if the elasticity of demand for future income in terms of present income were unity), the second reason for the L curve sloping down to the right would disappear, and B, although showing a lower rate of interest, would no longer indicate a greater volume of employment. If the propensity to consume were to diminish with the rate of interest (i.e., if the elasticity of demand for future income in terms of present income were less than unity), B would indicate a lower volume of employment.[1]

---

[1] The complication that at different levels of employment the distribution of income between wage-earners and others, therefore, also, the liquidity preference, will be different, is mentioned by Professor Pigou but the direction of this influence is not indicated. Such a difference in distribution will also affect the propensity to consume and so affect L again. Both of these complications are either left out of the argument or supposed to be included in the L curve.

[2] Except for the effects on liquidity preference, and on the propensity to consume, of the shift of real wealth from debtors to creditors. These complications, too, are neglected.

Professor Pigou does not consider such (*ex-ante*) schedules but examines a suggested equilibrium position (*ex-post*) for its consistency. He takes position C—at the same rate of interest as in the initial position and consequently the same volume of employment—and shows that it is not an equilibrium position. This can be done by showing that not all the conditions of equilibrium are satisfied, and the procedure is to assume all but one of the conditions to be satisfied and to show that from this it follows that the remaining one is not satisfied. Which condition is left to the last and shown not to be fulfilled is perfectly arbitrary, but the emphasis that naturally falls upon this condition is liable to make one suppose that it is more significant than the others. It would appear that Professor Pigou falls into just this trap.

He shows that at C, if all the other equilibrium situations are satisfied, price will exceed marginal cost so that there is a tendency for employment to increase, and concludes from this that employment in the new equilibrium will be greater. Although this happens to be the right answer,[2]

---

[1] If, in such a case, the declining transaction demand for money with a decline in the rate of interest were sufficient to offset the increasing liquidity demand, the L curve (and also the L' curve) would slope downwards to the *left*, and a small cut in wages would bring about a large fall in the rate of interest and a large fall in employment. Employment would have to fall as much as is necessary to offset the increased propensity to save that is brought about by the fall in the rate of interest. If the L curve were no steeper than the M curve and coincided with it, the rate of interest and the corresponding volume of employment would be in neutral equilibrium as long as wages were unchanged, and the smallest wage cut would reduce employment and the rate of interest indefinitely; while if it were flatter than the M curve, the initial "equilibrium" would be unstable even in the absence of a wage cut. These possibilities are examined in more detail and by a different method below, pp. 447–449.

[2] Accidentally, for the disequilibrium at C would bear the same symptoms, though the final equilibrium would show a *decline* in employment, if the propensity to consume were to move in the *same* direction as the rate of interest.

Professor Pigou's procedure obscures the essential part that the reduction in the rate of interest plays in bringing about the increase in employment, attributing the increase in employment to the wage cut rather than to the reduction of the rate of interest, which alone is essential—the wage cut being merely one way of bringing about the reduction in the rate of interest. Or, one might say, the wage cut has the described effects only *through* the reduction in the rate of interest.[1]

This criticism having been made by Mr. Kaldor[2]—much more completely than in this article, where the main issue is not the content of the particular argument but the methodology—Professor Pigou has yielded on the argument,[3] but persists in the faulty method and so gets into further trouble. He again concentrates on the examination of a situation *ex-post* to see if it is an equilibrium situation and to observe the values of its variables without paying adequate attention to the operating forces—the propensities—that determine what equilibrium position (if any) will be reached

---

[1] The general relationship here discussed can be illustrated by the following diagram:—

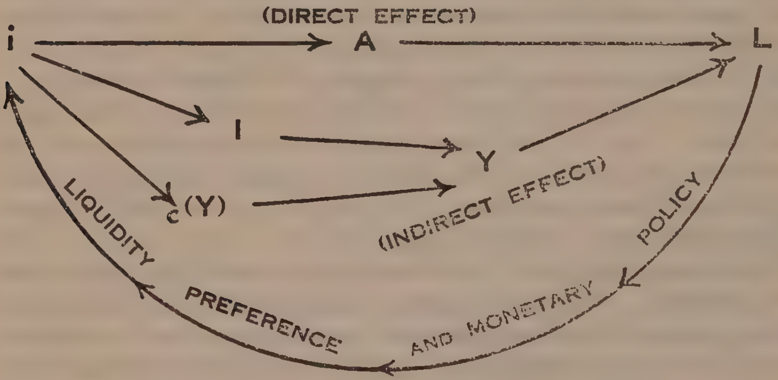


Fig. 3.

i, the rate of interest, affects A, the value of assets other than money, and this affects L, the demand for money to hold. i also affects I, the scale of investment and $C(Y)$, the propensity to consume. I and $C(Y)$ determine Y, income, and Y also affects L. L in conjunction with the monetary policy determines the rate of interest. This completes the simplified system of interdependent relationships. In the particular case taken by Professor Pigou, I is taken as fixed (at zero), so that this branch of the "indirect effect" drops out of the scheme. A wage cut has the effect of cutting L in the same proportion for given values of A and Y in terms of wage units. This reduces i and increases A, but whether the reduction in i increases or diminishes Y will depend on whether it increases or diminishes $C(Y)$.

[2] N. Kaldor, "A note on Money Wages and Unemployment." *Economic Journal* (December 1937).

[3] A. C. Pigou, "Money Wages in Relation to Unemployment," *Economic Journal*, March, 1938, pp. 134–38.

We now have *propensities* instead of *schedules* because more variables are brought in and the operating forces are functions of more than one variable.

This time, instead of a situation with the old level of employment, it is the new equilibrium that is the centre of attention. It is observed that in this new equilibrium, after the wage cut, employment is greater *and* the rate of interest is lower; but in spite of one over-generous adoption of a phrase used by his opponents,[1] Professor Pigou does not recognise the function of the lowered rate of interest as an *instrument* for bringing about the new equilibrium with the greater volume of employment.[2] It is for him simply another *result* of the wage cut, overlooked by him at first, but now recognised as parallel with the increase of employment. The use of the word " through " is conceded to insistent critics but only " in the sense " of a necessary concomitant in the new equilibrium—which takes away the whole significance of the word.

What Professor Pigou shows in his revised account of the argument is that *if* a new equilibrium is reached after a wage cut it will be one with a larger volume of employment and a lower rate of interest, or that if the rate of interest is somehow reduced, a new equilibrium with a larger volume of employment is possible after the wage cut without any change in monetary policy. What he does not show, and his method prevents him from showing it, is that the new equilibrium is reached only *through* a reduction in the rate of interest in the normal sense that the reduction of the rate of interest is a necessary step in the causal chain of events leading from the wage cut to the new equilibrium. The wage cut diminishes the demand for cash holding and thus lowers the rate of interest. The reduction of the rate of interest diminishes the desire to save so that there is greater expenditure on consumption and income increases until it has restored the desire to save to its original level. (In our case this, like investment, is zero.) The " liquidity preference theory of interest " is thus an essential part of the argument for without it no mechanism is indicated which would reduce the rate of interest and so bring about the increase in employment that is necessary for equilibrium.

---

[1] " In the sense that it [the wage cut] would not entail an increase in employment *unless* it entailed a reduction in the rate of interest, we may properly say that it acts on the volume of employment *through* the rate of interest." *Economic Journal*, March, 1938, p. 137.

[2] The smaller M which, with the wage cut, represents the same quantity of money in terms of wage units is available at a lower r if the monetary policy is unchanged. A shift in the supply curve of money—a liberalisation of monetary policy—has exactly the same effect of increasing the amount of money in terms of wage units available at any rate of interest and therefore brings about more directly the same results as a wage cut.

This result that a wage cut leads to increased employment and a lower rate of interest is reached by Professor Pigou for the more practical case, on which he concentrates his interest, where ρ, the rate of time preference, falls as Υ, the aggregate real income (that always moves in the same direction as employment), increases. ρ is essentially an equilibrium concept or a result which effectively obscures the nature of the propensity that it represents, namely the propensity to save as a function of Υ and r, the rate of interest. The mere use of the concept suggests, without explicitly committing the author to this view, that the elasticity of demand for future income in terms of present income is greater than unity. ρ is that rate of interest which is just high enough to prevent the representative man's time preference (or higher valuation of present over future income) from inducing him to consume some of his capital. A rate of interest lower than ρ would, presumably, not be sufficient to do this and would be accompanied by dissaving, while a rate of interest higher than ρ would be accompanied by positive saving so that in general an increase in r tends to increase S while a decrease in r tends to decrease S. A ρ which diminishes as Υ increases therefore implies that an increase in Υ offsets the effects of a decrease in r; and since a decrease in r tends to diminish S, this means that an increase in Υ tends to increase S. ρ falling as Υ increases therefore means that S is an *increasing* function of *both* r and Υ.[1] On these assumptions, stated much more explicitly by Mr. Kaldor, the results about the nature of the new equilibrium follow, even if there is no indication of how, if at all, the new equilibrium is reached.

---

[1] Mathematically the matter may be put thus :—
$S = F(r, \Upsilon)$. ρ is the set of values of r, one for each value of Υ, for which $S = 0$. $0 = F(\rho, \Upsilon)$. $dS = \frac{\partial S}{\partial r}dr + \frac{\partial S}{\partial \Upsilon}d\Upsilon$. If we consider only (equilibrium) positions where $S = 0$. dS also $= 0 = \frac{\partial S}{\partial r}d\rho + \frac{\partial S}{\partial \Upsilon}d\Upsilon$. ($d\rho$. not dr, because the total differential change considered is along the path where the effects on S of changes in r and Υ offset each other so as to keep $S = 0$) $\frac{d\rho}{d\Upsilon} = -\frac{\frac{\partial S}{\partial \Upsilon}}{\frac{\partial S}{\partial r}}$. If $\frac{d\rho}{d\Upsilon} < 0$ then $\frac{\partial S}{\partial \Upsilon}$ and $\frac{\partial S}{\partial r}$ must both be of the same sign, and from the implication in the concept of "rate of time preference" that $\frac{\partial S}{\partial r} > 0$ it follows that $\frac{\partial S}{\partial \Upsilon}$ is also > 0. (They might both be < 0 but this case may be neglected.) If $\frac{d\rho}{d\Upsilon} = 0$ then $\frac{\partial S}{\partial \Upsilon}$ must $= 0$ (or $\frac{\partial S}{\partial r} = \infty$ which may be neglected.) If $\frac{d\rho}{d\Upsilon} > 0$ then $\frac{\partial S}{\partial \Upsilon}$ and $\frac{\partial S}{\partial r}$ must be of opposite sign, and both of these possibilities are examined in the text· I am indebted to Dr. Oskar Lange for helping me to express these relationships in mathematical form.

The dangers of Professor Pigou's method are seen more clearly when he comes to consider the other cases. " If it [ρ] were independent of aggregate real income, a cut in money wages would increase employment, while leaving the rate of interest unchanged " (p. 138). Here the increase in employment does not come " through " a reduction in the rate of interest in Professor Pigou's sense of " together with ". But it still comes about through a reduction of the rate of interest in the normal sense. For " independence of ρ " must mean that $\frac{\partial S}{\partial Y}=0$. The wage cut reduces demand for cash to hold which lowers r, which increases the propensity to consume (since $\frac{\partial S}{\partial r}>0$) which increases Y indefinitely (the multiplier is infinite) until the increased demand for cash to hold for transaction purposes restores r to its original level where it is once more identical with ρ. Here the *instrumental* fall of the rate of interest with a decline in the demand for cash holdings is seen in its pure form—without any *concomitant* fall in the rate of interest in the final equilibrium.

Even more difficult is the last case where Professor Pigou says :—" If it [ρ] rose as real income increased, such a cut would lead in some conditions to an increase in employment and the rate of interest ; in other conditions to a decrease in both " (p. 138). This is not correct. A rising ρ (since $\frac{\partial S}{\partial r}>0$) must mean $\frac{\partial S}{\partial Y}<0$, certainly an assumption strange enough to explain Professor Pigou's lack of interest in it, but a closer examination of this case will help us to understand the more interesting ones where Professor Pigou's conclusions are right, but again only by accident.

If ρ is an increasing function of Y because $\frac{\partial S}{\partial r}>0$ and $\frac{\partial S}{\partial Y}<0$ (so that a movement of Y and r in the same direction can offset each other's effect on S, leaving it at zero, ρ thus moving with r) then if a wage cut leads to any equilibrium it *must* be one both Y and r (and so also ρ) higher than initially. There may indeed be another unstable position, with Y, r and ρ lower than initially, which satisfies all the equations considered by Professor Pigou, but there will be no tendency for a wage cut to lead to it.

Whether or not there will be a tendency for a stable equilibrium to be reached (with higher Y, r and ρ), will depend upon M the supply and L the demand for money and on the relation of ρ to Y. M is an increasing function of r (by banking policy), and L is an increasing function of Y and of w, the wage rate. For any given w, each value of Y will bring about a particular rate of interest, $r(Y)$, such that r is an increasing function of Y. If $\frac{\partial r}{\partial Y} > \frac{d\rho}{dY}$, i.e., if r is more elastic than ρ with respect to Y, a wage cut (which diminishes $r(Y)$) lowers r, diminishes the propensity to save (since $\frac{\partial S}{\partial r} > 0$) and increases Y. As Y increases, r, which had been reduced below ρ, increases more rapidly than ρ and approaches it but remains below it so that S remains less than zero and Y keeps on increasing until r reaches ρ in the new equilibrium with Y, r and ρ all higher.

If $\frac{\partial r}{\partial Y} < \frac{d\rho}{dY}$, i.e., if r is *less* elastic than ρ with respect to Y, r and ρ would diverge more and more and more from each other as Y increased so that the tendency for Y to increase would be aggravated and the movement would continue indefinitely until a region where conditions were different was entered. There is a point at which $r = \rho$, but it is at a lower level of Y, and there is no tendency for Y (and so r and ρ) to contract so as to reach this position even though it does fit Professor Pigou's equations.

This result is obtained if a ρ increasing with income is interpreted in conformity with the tacit suggestion that surrounds the concept of "rate of time preference" that $\frac{\partial S}{\partial r} > 0$. If we reject this we get an interpretation of $\frac{d\rho}{dY} > 0$ that is much less strange than the assumption that people wish to save less when their income is greater. All we need assume is that the elasticity of demand for future income (or capital assets) in terms of present income is less than unity and we get $\frac{\partial S}{\partial r} < 0$ which, with the normal $\frac{\partial S}{\partial Y} > 0$, gives us $\frac{d\rho}{dY}>0$. A higher rate of interest now tends to diminish saving, but this can be offset by a higher income so that the same amount (zero in our case) may be saved if Y moves in the same direction as r. r and ρ will then move together.

In this case we get opposite results. The only equilibrium to which a wage cut can lead is one with lower Y, r and ρ, and it is reached only if $\frac{\partial r}{dY}<\frac{d\rho}{\partial Y}$. A wage cut which lowers r now *increases* the propensity to save and *decreases* Y. r is thus reduced still further, but less rapidly than ρ, remaining below it so that (voluntary) S remains greater than zero and Y keeps on diminishing until r reaches ρ in the new equilibrium with Y, r and ρ all lower. If $\frac{\partial r}{\partial Y}>\frac{d\rho}{dY}$, r and ρ would diverge more and more as Y fell, so that the tendency for Y to diminish would be aggravated. There is a position at which $r=\rho$, but it is at a higher level of Y and there is no tendency for Y (and so r and ρ) to increase so as to reach it.

There is similarly an alternative possibility for the case where ρ is independent of Y. $\frac{\partial S}{\partial Y}$ has to be equal to zero, but $\frac{\partial S}{\partial r}$ may be less than zero. If this is the case a wage cut will reduce r, *increase* the propensity to save, reduce Y and lower r further while ρ remains the same so that the divergence between r and ρ and the propensity to save increase still further, and there is no tendency towards the position, with greater Y, where $r=\rho$ in accordance with the equations.

A form of argument like that here examined, which concentrates on the examination of final "equilibrium" positions and fails to observe whether the forces of propensities indicated by the schedules or functions are such as would lead to the "equilibrium" or not, can legitimately be criticised as too much *ex-post* and insufficiently *ex-ante.* It is, however, probably better to say in plain English what is wrong with it.

The "Rate of Sale" and the "Velocity of Circulation of Goods": A Comment

By Arthur W. Marget

To his article in Economica for February, 1939, entitled "The Equation of Exchange: A Suggestion," Professor L. M. Fraser has been kind enough to append a courteous note in which he deals at some length with some earlier work of mine in a corner of the field of monetary theory that has been tilled by comparatively few workers of this generation. Limitations of space forbid my dealing with all the points that he raises in his note, to say nothing of dealing with all those which he raises in the body of his article. What follows deals only with a single point raised by Professor Fraser: namely, the relation between the concepts of a "rate of sale" and of a "velocity of circulation of goods", respectively.

It is gratifying to observe that Professor Fraser accepts as a methodological principle the contention that the essence of an "analytical" approach to the problem of the "demand for and value of money" is that it undertakes to break down broadly inclusive elements, such as the Fisherine T, into components (such as the "amount" of the goods sold for money, on the one hand, and their "rate of turnover" on the other) which are subject to different controlling forces (p. 73 of his article). It was for this reason that I undertook to break down even my "velocity of circulation of goods", which covers a much narrower range of phenomena than Professor Fraser's U, into two further components: namely, (1) the "number of middlemen's sales", and (2) what I called the "rate of sale." According to Professor Fraser, on the other hand, the claim of the "rate of sale" to be "an independent constituent of velocity of circulation seems", upon closer examination, to "vanish". I fear, however, that Professor Fraser's conclusion is based upon a failure to appreciate the nature of the phenomenon which *my* concept of a " rate of sale " is supposed to summarize.

1. By " rate of sale ", Professor Fraser understands merely a *component* of the " number of middlemen's sales " : for, according to his usage, the number of middlemen's sales is obtained by taking what he calls the " rate of sale ", or u, defined as " the rate at which . . . [goods] change hands per indefinitely small unit of time ", and multiplying it by t, defined as " the number of such small units of time comprised in a finite period, say a year " (p. 76, note 5 ; cf. p. 69). I need not state in detail here my reasons for distrusting profoundly the use of the concept of " infinitely small units of time " in problems such as those under discussion. It is sufficient, for my present purpose, to call attention to the fact that what *I* have meant by the distinction between the " rate of sale " and the " number of middlemen's sales " is not at all what Professor Fraser means by the distinction. *My* " rate of sale " means to call attention to the phenomenon which is more often discussed under the heading of variations in the size, relative to sales, of *stocks of commodities held on hand by dealers*— a phenomenon the importance of which will hardly be denied by anyone familiar with the role assigned to such variations in stocks in monetary theory (as in the type of analysis of which Mr. Hawtrey is the most notable protagonist), or with the discussion, by business observers, of the role played by " inventories " in episodes such as the boom and collapse of 1936–1937 in the United States. The " number of middlemen's sales ", on the other hand, has to do with what, in the second of my articles on " The Definition of the Concept of a Velocity of Circulation of Goods " (in ECONOMICA, August, 1933, p. 287), I referred to as " the degree of differentiation in the processes of production and marketing ". It is true that conditions can be imagined under which the two factors will vary in the same direction ; but it is equally true that there are neither *a priori* nor empirical reasons for assuming that they *must* do so (cf., in this connection, my article in the *Quarterly Journal of Economics* for November, 1932, p. 33, note 9, and the references there given). So long as this is so, there is every reason for keeping analytically separate the two components of the concept of a " velocity of circulation of goods " thus indicated.

2. It should be clear, from this reminder as to what *I* have meant by the concept of a " rate of sale ", that I could not have assigned to it the meaning which Professor Fraser tentatively suggests : namely, " the number of sales *until the good finally passes from the market* ". The very expression " the number of sales " would suggest that Professor Fraser is still thinking of *repeated* sales of the same good—that is, the kind of phenomenon that I have included under the heading of the " number of middlemen's sales "—whereas the very concept of a " rate of sale ", as I use the term, means that *it cannot have a value greater than unity*. For if a good, having been added to the category of " goods intended for sale " during a given period, is sold within that period instead of making part of inventories carried over to the next " period ", it will have a " rate of sale ", in my sense of the term, of 1, and of no more than 1. If, on the other hand, inventories are carried over to the next " period ", the " rate of sale " may be anything ranging from just under 1 to zero. It is obvious, therefore, that a " rate of sale ", so conceived, has nothing to do with the *repeated* sales which are suggested by Professor Fraser's tentative interpretation.

3. In view of the fact that Professor Fraser's difficulty seems to have arisen from a failure to use the term " rate of sale " in the sense in which I have used it, I am by no means certain as to the meaning to be attached to his statement that if, by " rate of sale ", we mean the " number of sales until the good finally passes from the market ", then " it has no necessary connection with velocity of circulation at all, since a change in it may be cancelled by a corresponding change in the length of time during which the good remains on the market ". If, however, by " on the market " Professor Fraser means " in inventories ", then his proposition would provide a proof for the *necessity* of including the " rate of sale " as a separate component of the " velocity of circulation of goods ", rather than the opposite. For, as we have seen, the " number of sales until the good finally passes from the market " is associated with the " number of middlemen's sales ", if it is associated with anything. A demonstration, therefore, that an effect upon *T* of a change in the " number of middlemen's sales " may be covered by a " cancelling " change in the form of a change in the rate at which goods are passing into and out of stocks

on hand, means that we must be prepared to trace the effect of *two* factors affecting the ratio I have presented as defining the " velocity of circulation of goods ", rather than *one*. I venture to suggest, therefore, that Professor Fraser has not demonstrated his proposition that, upon closer examination, the claim of the concept of a " rate of sale ", as I have used the term, " to be an independent constituent of velocity of circulation seems to vanish ".

4. A final word may not be amiss, by way of clarifying the implications of Professor Fraser's statement of my position as alleging that " the velocity of circulation of goods must be so defined as to include " the two factors which I have distinguished as (1) the " number of middlemen's sales " and (2) the " rate of sale ". A fairer statement of the considerations involved would seem to me to be represented by the following propositions:

i. I have regarded the fact that my " velocity of circulation of goods " is so defined as to reflect the influence of two factors rather than one as in a sense unfortunate (see, for example, ECONOMICA for August, 1932, pp. 288 ff.). It results, indeed, only from the fact that it is not practicable to obtain a measure of the " number of middlemen's sales " by " following goods in their course through the productive process " and making a direct count of the " number of times goods pass from hand to hand " (see my article in the *Quarterly Journal of Economics*, November, 1932, p. 5). It is therefore necessary to approach the problem indirectly and it is because I was forced to recognise that the least complex measure obtained by such an approach reflected movements other than changes in the " number of middlemen's sales ", that I insisted that my proposed measure would be expected to reflect the influence of two major types of change, rather than one.

ii. If, nevertheless, I have continued to defend my definition of the " velocity of circulation of goods " against alternative analytical devices intended to deal with the specific phenomena involved, I have had two reasons for doing so. The first of these reasons is the essentially negative one that these alternatives are themselves such as to register the effect of even more " heterogeneous " factors than my own concept (cf. my *Theory of Prices*, Volume One, pp. 552 ff.). The second reason, however, is the positive one that it is possible to provide a check with respect to the relative influence, in my final measure, of (1) the " number of middlemen's sales " and (2) the " rate of sale ", respectively, by direct evidence with respect to movements in the " rate of sale " itself, as provided by data recording the movements in the size, relative to sales, of " *stocks* of goods intended for sale "—in other words, by data with respect to " inventories "[1] (see the *Quarterly Journal of Economics* for November, 1932, p. 32).

iii. As the result of recent discussion with some of my students and colleagues, I venture to suggest now a formalization of the last point, in particular, which should have the effect of removing what I myself have regarded as the most serious substantive shortcoming of my proposed measure.[2] The suggestion is simply this:

Let us write $v=m+r$, in which v represents the "velocity of circulation of goods ", as I define the concept, m represents the " number of middlemen's sales ", and r represents the " rate of sale ", in my sense of the term. What this expression tells us, in the first instance, is that the measure for the " velocity of circulation of goods " obtained by my formula will vary not only with changes in the " number of middlemen's sales " (m), but also with changes in what I have called the " rate of sale ". Our problem is to devise a method for eliminating the influence of r from our measure of v, and at the same time to provide, if possible, a direct measure for r.

Let $r=\frac{G-i_e}{G}$, in which G represents the volume of " goods intended for sale ", in the sense in which I have consistently used the term, and i_e represents the *amount of these goods*

---

[1] It should be pointed out that whether this " direct evidence " can be held to provide a *measure* of the " rate of sale " will depend (1) upon how the " rate of sale " is defined ; and (2) upon how the " evidence " is used. The matter is of some importance, if we are to avoid misunderstanding as to the meaning of a given statistical figure presented as a measure of the " rate of sale ". If, for example, the " rate of sale " is defined as the ratio of goods sold to the *average stocks on hand* during the period taken for investigation, the " rate of sale " may very well be greater than 1 ; whereas, according to my own definition of the " rate of sale ", it can never be greater than 1. It would be wise, therefore, in order to avoid confusion, to provide a different name for the " rate of sale " when the latter is defined as the ratio of goods sold to the *average stocks on hand* during the period—say, the " rate of stock turnover "—and to represent it by a separate symbol : say, r'. On the objections to identifying r', as so defined, with the " velocity of circulation of goods " itself, see my article in the *Quarterly Journal of Economics*, November, 1932, pp. 30 ff.

[2] I should like to express my appreciation, in this connection, to Messrs. John K. Langum, Carl L. Nelson, Henry H. Villard and C. R. Youngdahl, all of the University of Minnesota, and all of whom proved helpful in one way or another. The final algebraic formulation owes much to Mr. Youngdahl, in particular.

held as inventories at the end of the period taken for examination. It is clear that this formula satisfies the criteria indicated above for the limits within which r may vary: it will vary from 1 (in the case in which all goods intended for sale are actually sold during the period) to zero (in the case in which none of the goods intended for sale are actually sold during the period). Having thus provided a separate measure for r, it is obvious that a measure for m is provided by the expression $v=m+r$; so that we have thus obtained separate measures for each of the two elements which have been traditionally discussed under the heading of a "velocity of circulation of goods".

Note on Bank Window-Dressing

By F. W. Paish

It is now more than eight years since the MacMillan Committee expressed the following opinion on the practice of bank "window-dressing":—

> "We are not aware that these practices serve any useful purpose. We think that they are not creditable to our banking system; and we recommend that they should be given up at once."

Despite this authoritative disapprobation, the practice has been continued by at least some of the banks on a scale which in total shows little absolute reduction, though perhaps some decline relatively to the size of the banks' assets.

Among the effects of the practice are not only a fictitious inflation of the published figures of the clearing banks' average monthly cash reserves, but also a seasonal movement, the amplitude of which varies from year to year, and marked though varying differences between the monthly average figures and the figures for the ends of the half-years. It further induces a seasonal movement in discount rates of varying magnitude, and usually, but not always, very marked seasonal movements in the constituent items of the Treasury's Floating Debt.

Such fluctuating seasonal movements cannot be removed by any system of averaging. The task of separating seasonal from other influences may, however, be facilitated by an understanding of the causes of the seasonal movements and their fluctuations. It is hoped that the following note will contribute towards such an understanding.

The apparent expansion of the total of the banks' average cash reserves, as shown in the clearing banks' monthly statements, would not by itself cause any seasonal fluctuation in the figures; indeed, since the amount of this type of window-dressing usually seems to vary inversely with the size of the true cash reserves, it would tend to mask genuine fluctuations. The method by which this type of window-dressing is achieved is as follows:—Different banks make up their weekly balances, from which the monthly returns are averaged, on different days of the week. Each bank in turn calls from the market money which is in fact provided by the others, thus passing cash round from bank to bank in the manner of the Sicilian cities' passing round their combined gold plate for the delectation of the

Athenian ambassadors. In the combined statements of the clearing banks, this fictitious inflation of cash reserves seems to vary between about £15mn, and £25mn.

At the ends of the half-years, however, when the banks compile their full individual balance sheets, all returns have to be made for the same day. Unless special measures were taken, cash reserves would then show a sudden drop from the previous monthly averages. In fact, the banks wish to show higher cash reserves on these dates than normally, in order to strengthen their half-yearly balance sheets, and the half-yearly figures usually show a rise in cash of anything up to £35mn. above the average monthly levels. The total amounts of window-dressing therefore needed at the end of each half-year may be anything up to £50mn. or so. The half-yearly rise is usually sufficient to raise the average cash reserves of the months before and after the half-years to a level well above the averages for the other eight months.

The traditional method of half-yearly "window-dressing" is for the banks to call in part of their short loans from the market, thereby obliging the market to rediscount with the Bank of England. The Bank Return then shows increases in Discounts and Advances on the assets side and in Bankers' Balances on the liabilities side. In order to prevent their half-yearly balance sheets from showing an unduly low figure for Call Money, the banks during the preceding month appear to increase this item by abstaining from buying bills as freely as they normally would, and thus obliging the market to borrow more freely on short term. Thus the half-yearly returns usually show lower Discounts, slightly more Call Money, and substantially more cash, than the monthly averages.

During the period before 1921, when Treasury Bills could be purchased as desired for cash through the "tap", and could therefore be bought to mature on almost any day desired, it was easy for the banks to arrange that a large volume of bills should fall due at the end of each half-year. By refraining from replacing these until the beginning of the following half-year, the banks could compel the Treasury to provide them with the required cash by borrowing it from the Bank of England on Ways and Means Advances. In effect, the banks could call from the Treasury instead of from the market.

When, after 1921, the issue of three (calendar) months bills to the public by tender gradually took the place of issues through the "tap", it was found possible to adapt this technique to the new conditions. Since tenderers were entitled to specify the day in the week from which they wished their bills to run, it was usually possible to arrange that all the bills taken up by the market in the appropriate week were dated in the first half of the week, to mature just before the end of the half year, while in the last week of the half-year the bills would be dated and paid for in the second half of the week, after the end of the half-year. In this way, at the end of each half-year the Treasury could be obliged to repay the maturing bills *before* the end of the half-year, and would receive cash for the new bills only *after* the end of the half-year. It would therefore be compelled to find the cash to fill the temporary gap, usually by borrowing it from the Bank on Ways and Means Advances, and so expanding the item " Government Securities " in the Bank return. This method was used from 1921 onwards to supplement borrowing from the Bank by the market, and in recent years has almost entirely replaced it whenever the end of the half-year falls on a suitable day. The occasions on which it is not practicable are when the last day of the half-year happens to fall on a Saturday or Sunday (or Monday at the December half-year, when it is not possible to date bills to mature on that day). When this occurs, it is impossible for bills to mature before the half-year and to be dated after the half-year in the same week. In this case the only way for the market to compel the Treasury to provide it with cash over the half-year would be for it to miss a week's bills altogether. This it appears reluctant to do, and therefore, when the half-year falls at a week-end, it is compelled to have recourse to the Bank in the traditional way. The contrast between the two procedures is shown in the following recent examples (£ Mn.) :—

1. END OF HALF-YEAR FALLS AT WEEK-END

		Ways and Means Advances		*Bank of England Banking Dept.*		
1938	*Total Treasury Bills*	*Govt. Depts.*	*Bank*	*Bankers' Deposits*	*Govt. Securities*	*Discounts and Advances*
Dec. 21st ..	—	—	—	98	72	15
„ 24th ..	988	42	—	—	—	—
„ 28th ..	—	—	—	101	69	29
„ 31st (Sat.) ..	986	46	5	—	—	—
1939						
Jan. 4th ..	—	—	—	*136*	71	*49*
„ 7th ..	998	41	1	—	—	—

2. END OF HALF-YEAR FALLS DURING WEEK.

1937						
Dec. 18th ..	939	42	—	—	—	—
„ 22nd ..	—	—	—	98	96	7
„ 25th ..	942	41	—	—	—	—
„ 29th ..	—	—	—	*121*	*115*	9
„ 31st (Fri.) ..	*890*	39	*56*	—	—	—
1938						
Jan. 5th ..	—	—	—	*129*	*108*	15
„ 8th ..	934	42	7	—	—	—

The fact that, in the above examples, the only available Bank of England figures are dated some days before and after the end of the year prevents them from reflecting the full effects of the window-dressing operations. When the last day of the half-year falls on a Wednesday, Government Securities and Bankers' Deposits at the Bank of England both show increases approximately equal to the increase in Ways and Means Advances shown in the Floating Debt return of the same date. The exact extent of window-dressing by means of market borrowing from the Bank when the half-year coincides with a week-end can naturally never be precisely ascertained, but there is some reason to believe that the amount of window-dressing tends to be less than when the Treasury can be obliged to provide the cash. On June 30th of both 1934 and 1935 (a Saturday and Sunday respectively) the year-end figures for the cash holdings of the nine clearing banks were actually appreciably below the averages for both June and July. The same tendency can be observed in December, though no actual fall below the monthly average is recorded in recent years :—

Clearing Banks

(Nine banks to 1936. Eleven banks 1937 and 1938.)

Excess or Deficit of Half-yearly cash reserves on averages for preceding and following months (£Mn.) :—

	June			December		
	Day of week of 30th	*Amount of Excess (+) or Deficit (−)*		*Day of week of 31st*	*Amount of Excess (+) or Deficit (−)*	
		On average of June and July	*On average of May and August*		*On average of Dec. and January*	*On average of Nov. and February*
1931	Tues.	+16	+22	Thurs.	+26	+35
1932	Thurs.	+10	+15	*Sat.*	*+13*	*+23*
1933	Friday	+ 4	+ 6	*Sun.*	*+ 9*	*+14*
1934	*Sat.*	*−16*	*−19*	*Mon.*	*+ 1*	*+10*
1935	*Sun.*	*−10*	*− 8*	Tues.	+20	+23
1936	Tues.	+ 8	+ 6	Thurs.	+20	+28
1937	Wed.	+12	+17	Friday	+13	+21
1938	Thurs.	+21	+30	*Sat.*	*+ 9*	*+17*

The lower excess of half-yearly cash reserves over the averages of the months before and after at times when the market is obliged to borrow from the Bank seems to be partially attributable to the fact that the Bank is prepared to lend to the Treasury for shorter periods than it is prepared to lend to the market. Thus, at times when the market borrows, it takes longer for the abnormal Bankers' Balances at the Bank to disappear, and the high cash reserves tend to be maintained longer into the following month, thus raising the average of that month and reducing the gap between the half-yearly figure and the average of the two months. As, however, will be seen from the above table, the difference between week-end and mid-week half-years persists even when the half-yearly figures are compared with the averages for two months earlier and later. The reason for this difference is presumably connected with the fact that the cost to the market of borrowing from the Bank is considerably greater than the temporary loss of interest on Treasury bills.

The reverse of the half-yearly Treasury bill movements is generally (though, in consequence of the vagaries of the calendar, not invariably) seen at the ends of the intermediate quarters. Since the new bills were taken up after the end of the half-year, they mature after the end of the quarter, usually in the second half of a week. In order to prepare for the next half-year, the new bills must be dated and paid for before the end of the quarter, in the first half of a week. Thus the market has to pay for the new bills before the old ones mature.

The Treasury is therefore over-supplied with funds for a day or two, and the result is seen in a temporary rise in the amount of Treasury Bills outstanding and a corresponding fall in Ways and Means Advances from Departments, as the Treasury uses its surplus funds to repay the latter. When the end of the quarter happens to fall on a Wednesday, the effects of the temporary receipt of these additional funds by the Departments can be traced in a sharp rise in Public Deposits at the Bank of England. Thus on March 31st, 1937, Public Deposits rose from £23 Mn. to £52 Mn., falling back on April 7th to £25 Mn., while Bankers' Deposits fell from £82 Mn. on March 24th to £62 Mn. on the 31st, subsequently recovering to £95 Mn. on April 7th. As, however, the banks do not make up balance sheets at the ends of these quarters, they do not mind this temporary depletion of their reserves. When the half-yearly window-dressing is financed by market borrowing from the Bank, there is naturally no reaction at the end of the following quarter.

CORRECTION

On page 369 of our August issue a printer's note was inadvertently allowed to appear at the foot of the review of Mr. P. T. Ellsworth's *International Economics.*

The review in question was by Dr. F. C. Benham.

Book Reviews

Das Problem der sozialoekonomischen Synthese. By JOHAN ÅKERMAN. C. W. K. Gleerup, Lund. 1938. 329 pp. No price stated.

It is always interesting to study those occasional reflections on the philosophical foundation of a science which productive research workers publish in the more contemplative moments of their work. Their efforts, of course, do not necessarily contribute to a positive solution of such problems, but even then their indirect value is usually great: at least they furnish the philosopher with a wealth of experimental material which demonstrates the innumerable pitfalls lying in the way of a real philosophic clarification. Åkerman's lectures on "Das Problem der sozialoekonomischen Synthese" seem to be largely of this type. They are intended to make the reader aware of the important questions as to how empirical observations can be connected with rational theory. It is indeed desirable for the inductive scientist to know about the epistemological background of what he is doing, and in applied Economics the guidance of some firm knowledge about the nature and applicability of ethical standards would seem to be indispensable. Åkerman's lectures put such questions before the reader, but they do so by issuing a challenge rather than by supplying a ready answer.

Åkerman's outlook is largely determined by Max Weber and the philosophical current known as "Wissenssoziologie". It is true that Åkerman hesitates somewhat to consider all economic theory as a rationalisation merely of ephemeral political situations and doctrines (p. 23), but he certainly has accepted the leading idea of establishing a close parallelism between the political and social development of society on the one hand and the development of the instruments of economic analysis on the other. Naturally the facts are not always amenable to such a treatment; however, it is the method of "ideal types" that makes him see "the great lines of connection" (p. 76).

Here is the skeleton: Feudalism is followed by Mercantilism, which in turn is followed by Liberalism; Liberalism suffers the same fate of displacement from Planned Economy or Autarchism. Behind all this strange ebb and flow of the "last 1,000 years we can divine a continuous cumulative tendency. Each system takes over the experiences of its predecessors and the real capital. It is a process of *perfection* in which each type has a greater scope to realise the *intentions* of its forerunners" (p. 75). This construction, I beg to point out with emphasis, is based neither on empirical knowledge nor on philosophy. It is true that from Aristotle onwards philosophy has been swamped periodically with mystical entelechias and their motions and strange confabulations on the dialectic adventures of the "Weltgeist". To open up astrological aspects of history in the way, e.g., of O. Spengler seems to have exerted at all times a strange fascination on philosophically minded writers. But if any lesson can be learned from these experiments it is one of the utter impossibility and baselessness of such divination, a warning to keep apart knowledge and mythological dreams. Such speculations cannot be based on empirical history either. The headlines of chapters are a convenient device for the grouping of the historical narrative in well-balanced, digestible portions, but they certainly do not give us any inkling of necessary developments and their laws.

Åkerman, however, sets out to force the trends of the history of economic doctrines into this framework. Economics to him is nothing but a reflection of the opinions on world and life current at a time (p. 84). "That there was no economic theory in mediæval days is only natural, because in a world in which economic variables were either not considered or were determined according to standards based on theological speculation, there was really no room for such analysis" (p. 84). Also Mercantilism could hardly produce a total, scientific explanation of the economic system (p. 84). Classicism, Marxism and Autarchism (Liszt) originate from critical objections to the excesses of the dominant economic systems (p. 102).

Equilibrium analysis and the Marginal Utility approach require more twisting. However, is not marginal utility analysis essentially "atomistic", and does it not represent, therefore, the essential feature of free competition? Is not, moreover, equilibrium analysis, the method of simultaneous interdependent equations closely linked with the liberal *faith* in the *natural order*? Such are, indeed, Åkerman's contentions. "The marginal utility doctrine was never more legitimate than at the time of its first occurrence, about 1870, when free competition was realised to a degree which never occurred before and after" (p. 33). And he does not hesitate to infer that equilibrium analysis is "a closed chapter" in the history of the social sciences which at best may still have some value in the didactic presentation of general interdependence of important factors, but which is definitely unsuited for further causal analysis (p. 33).

Here the distorting influence of Åkerman's and similar constructions can be seen at its worst. The great achievement of equilibrium analysis, I submit, lies in the discovery that the economic process has to be conceived of as the result of forces, forces which Marginal Utility theory shows to be the relative strength of whatever motives the participants in exchange experience. The next step was the framing of suitable hypotheses about the way in which motivations are typically determined. Here the Gossen Laws served as a first approach. However, the quantities involved in acts of exchange were obviously only one among many other factors that influence the valuations of the individuals concerned. To get a more satisfactory explanation of reality the knowledge which the individuals possess of each other and of impending changes had to be taken into account. This gave rise—within the framework of utility analysis—to the exploration of anticipations. Now it is this body of mutual knowledge, and its transmission in a society, which makes the system in a specific way interdependent. Two courses were open for theoretical analysis: either one could conceive of interdependence to be mediated by knowledge in such a way that the economic process achieved compatibility of the intentions of the individuals, not frustrating their anticipations. In this case the system would show a tendency towards an equilibrium. Or one could conceive of this mediating knowledge to be " imperfect " and therefore giving rise to frictions and maladjustments as they are studied now in economic dynamics. But in either case the basic approach is the same: the problem is always the determination of the acting forces and their resultant. And here we have, indeed, a *rational invariant* which will be applied in any sensible analysis of social processes at any time and place.

Åkerman, who wants to shed light on the connection between empirical observation and rational theory misses this crucial point entirely. He misses it because his ideal-typology makes him enlarge on merely accidental peculiarities of doctrines until they become very caricatures of what they originally meant. Marginal Utility analysis in some contributions may have appeared to be " atomistic ", but there is really no need for it to be so. And the method of simultaneous equations is certainly neither limited to free competition, nor to static analysis, nor has it essentially anything to do with a pseudo-religious belief in the " invisible hand ". It was not an institutional bias that made economic theorists turn to questions of statics first, but simply the appalling difficulties presented by the construction of suitable models for the interdependence in any other system.

The existence of rational invariants in the methods of economic analysis, however, has not escaped Åkerman's attention altogether. " Why does one find for more than one century an uninterrupted continuity, or better, a stagnation in economics in regard to the psychological constitution of man ? "—he asks himself on p. 46. But instead of clearing up this enigma by an inquiry into the sources of knowledge he is misled by his historical mythology into an explanation in which the origin of economics in theology and jurisprudence, the rationalisation of power-politics, and the principles of democracy play a prominent part (p. 46). The fruitful problem of separating what is of rational origin in our knowledge from its empirical and shifting contents is thus disfigured by him into a pseudo-problem of finding a synthesis between the different economic theses, or systems, as they emerged in the course of time from their respective institutional background. I regret that I cannot follow Åkerman on these paths.

It is my serious hope that no reader of these critical remarks will feel that they contain a disparagement of Åkerman's book. I feel that these lectures are in fact a most stirring document of a truly babel-like confusion that seems to have fallen upon many of the most thoughtful economists. It should give rise to serious thought that a prominent research worker should put on paper a proposition like this: "One does not compare two explanations on the structure of matter, two symphonies, two philosophic systems, two dramas, according to the principle true or not true. The word 'true' has no standing any longer in economic deductions which intend to elicit novel and fruitful questions from reality" (p. 114). May we hope that with the expression of such destructive relativism the climax has been reached of this philosophic disease that spread so rapidly during recent years?

HARRO BERNARDELLI.

An American Experiment. By E. M. HUGH-JONES and F. A. RADICE. Oxford University Press. 1936. viii + 296 pp. 6s.

This is an excellent description and a sound analysis of the New Deal as it appeared in the early days of the Roosevelt administration. It has permanent value as a guide through its maze of legislation, especially as it was written at a time when much that has gone since seemed permanent. The little book is certainly the best factual introduction to the U.S. as reshaped by Franklin Roosevelt.

The authors have succeeded in impressing upon the reader the complexity and the multiplicity of the American political landscape, though they have approached it too much from a statistical angle. The reader, for example, scarcely realises the prevalence of a kind of semi-feudalism in a large part of the U.S.A., and de-feudalisation is perhaps the most interesting part of the New Deal. Nor does he learn enough about what might be called the American Spirit, which was at the bottom of a good many of the dodges of the New Deal. Its monetary and financial legislation did not owe much to the monetary theories of Warren or Keynes but a great deal to the deep-seated inflationist "fiat money" sentiment of the West and part of the South. As Uncle Sam had given the land, which God, not Uncle Sam, had made, for next to nothing to the farmers, they cannot understand why they should pay interest to a bank for money (greenbacks) which

Uncle Sam had manufactured. When the New Deal was started I described it as the application of the cocktail method to social legislation: it is a mixture of rather incongruous ingredients which, however, had a kick in it. This "kick" undoubtedly intoxicated a good many of the New Dealers and made them see epoch-making original discoveries when there was but reckless experimental opportunism. Unfortunately this very mixture of expedients and dodges makes it next to impossible to ascribe particular results to specific measures. But it may be said that the mere monetary dodges have not succeeded otherwise the "universal price policy" which they represented need not have been supplemented by a whole series of "sectional price policies"; these "pluralistic" efforts would have been quite superfluous had the "monistic" monetary cure been really effective.

The authors rightly praise the stupendous administrative achievement which made a gigantic new social machine function efficiently whilst it was in process of creation. In this respect the New Deal is the greatest triumph of the American genius. Notwithstanding a good deal of penetrating criticism, they are too lenient to the half-baked theories in which many leading Brain Trusters indulged. General Johnson's *The Blue Eagle from Egg to Earth* or Raymond Moley's book first published in articles in the *Saturday Evening Post* exhibit quite naively the isolationist economic obscurantism in which many self-proclaimed founders of a "new world order" were steeped. Mr. Roosevelt as a professional politician had every right to be and to act as an opportunist experimentalist. The Brain Trusters, who posed as profound social thinkers, had not. Though some of them did a great deal of honest hard work, others were merely smart and shallow boosters. They endeavoured to use the emergency for establishing a permanent new social order without having to run the gauntlet of constitutional amendments by which the rigid American constitution habitually blocks reform. Their judgment was at fault: during the grave days of emergency very far-reaching constitutional changes could have been carried. The President was persuaded to neglect this chance and to carry reform under the emergency clauses dealing with recovery which put almost dictatorial powers at his disposal. Naturally these powers were withdrawn when the crisis subsided and his enactments were submitted to the scrutiny of the Supreme Court whose members are in the habit of interpreting legality in the light of quickly changing public opinion. In this way a good deal of the New Deal's best work was scrapped or diluted and the most outspoken defender of "liberalism" was held up to the public as a Fascist dictator. This weird mixture of intellectual woolliness and wire-pulling smartness which is now quite openly exposed by some Brain Trusters (Moley), is very tenderly handled by the authors—though it furnished the main arguments of the defenders of a worn out order.

M. J. Bonn.

The Economic Basis of Class Conflict and Other Essays. By PROFESSOR LIONEL ROBBINS. 1939. xiv + 277 pp. 6s.

This collection of essays covers a wide range but Professor Robbins claims for them, at any rate for the main body of them combined under the title "Group *versus* Social Interest", a certain unity. "The *leit-motiv* of the analysis," he says, "is exposition of the way in which forms of organisation facilitating group exclusiveness may be the cause of social disharmony."

All the essays have a practical bearing. Professor Robbins uses his power of forcible and lucid exposition to make a case and to give guidance to the wider public outside the limited circle of economists.

The title of the volume embodies that of the first essay. "Class conflict" is not dealt with elsewhere. Class conflict Professor Robbins traces to the divergence of interest of groups, and he argues that the divergence of interest of the employing and working classes which forms the basis of the class war of Marxian doctrine is not the most important. The Marxian case he regards as directed not merely against inequalities of opportunity but against the whole range of inequalities of income due to the existence of private property (p. 26).

But is not the Marxian case essentially directed against private *profit?* It is the easy money and big fluctuating incomes derived from profit that are the principal source of the inequalities. To them is to be traced that low marginal utility of money which is characteristic of the classes formed from the profit makers and from the rentiers and well-to-do professional people attached to them. Professor Robbins hardly gives adequate consideration to the aspect of collectivism as a proposal for suppressing private profit and severing the roots of these inequalities, though his general scepticism as to the effectiveness of a collectivist system would no doubt provide his answer.

There follow essays on the economics of restrictionism and on the supposed "inevitability" of monopoly. Professor Robbins contends that there is no technical inevitability of monopoly, only a political urge towards it. "The price of freedom is a vigilance which twentieth-century man, doped with over-much misery or enjoyment, has shown small disposition to afford, and which the intellectuals from whom he takes his lead have done little to evoke" (p. 79). But these "conspiracies against the public" would not be difficult to meet if the State did not support them and if intellectual leadership did its job.

An essay on the economics of territorial sovereignty excludes considerations of power or security, and is confined to those of "real income". It leads up to the conclusion that the principal advantage to a country of extensive territorial possessions is that it secures the country against restrictive and discriminatory measures that might otherwise be taken against it if they were the possessions of another country. There is much force in this argument, but Professor Robbins does not give adequate weight to the economic advantage of the sovereign power in granting concessions to profit-making enterprises, often including the power of exploiting extremely lucrative economic rent.

An essay on the causes of increased protectionism shows how trade depression, with the accompanying need for credit contraction, has reinforced the tendency towards protection which inevitably exists in consequence of the active self-interest of the group and the passive acquiescence of unorganised consumers.

There follows a cogent and well-informed criticism of the planning of British agriculture and the marketing schemes in which it has been embodied.

Finally the book ends with three essays on Government expenditure and economic activity. They are of a somewhat tentative character, and Professor Robbins declares in his preface that he is far from believing himself to have reached settled conclusions on the subject.

R. G. HAWTREY.

An Economic Program for American Democracy. By SEVEN HARVARD AND TUFTS ECONOMISTS (Richard V. Gilbert, George H. Hildebrand, Jr., Arthur W. Stuart, Maxine Yaple Sweezy, Paul M. Sweezy, Lorie Tarshis and John D. Wilson). The Vanguard Press, New York. 1938. ix + 91 pp. $1.00.

The essence of the programme contained in this stimulating and vigorously written pamphlet is unlimited public investment. "The notion that public spending can safely be resorted to only as a temporary emergency device must be abandoned." And if anyone should feel unduly concerned with the resulting rise in the public debt, he may read that "it is ridiculous to maintain that debt in general must be repaid", while as to interest payments, "surely the wealthy section of the nation cannot legitimately object to bearing its fair share of the cost of such payments". This may be well enough, though it makes somewhat ominous reading for those old-fashioned savers who know not Mr. Keynes. But even those who do know the *General Theory* (amongst others) may feel that such plausible and whole-hearted advocacy of public works *ad inf.* takes a little too much for granted. The doubts recently expressed by Mr. Kaldor, for instance, about the inherent instability of the economy in conditions of full employment, suggest a certain caution; and the present programme of public works in this country is, of course, a concession to the necessities of international politics rather than to the doctrine of the multiplier.

More serious perhaps is the failure of the authors to find sufficient space, in an economic programme for democracy, to devote to safeguards for the democracy itself. What would a democracy be like in which the mainspring of the economic system consisted of Government investment ? Under what conditions of work and wages would the mass of Government contracts be executed and who would decide these conditions ? Experienced New Dealers sometimes show a reassuring awareness of the potential threats to democracy in a régime which was ostensibly set up to protect it.[1] It is a little disappointing, therefore, to find that seven Harvard and Tufts economists in their panegyric on the past record and future potentialities of the New Deal do not face squarely the issue which the title of their book itself raises.

A. S. J. BASTER.

Statistical Methods Applied to Economics and Business. By FREDERICK CECIL MILLS. London: Pitman. 1938. xvi + 604 pp. 15s.
Introduction to Economic Statistics. By WILLIAM LEONARD CRUM, ALSON CURRIE PATTON and ARTHUR ROTHWELL TEBBUTT. London: McGraw-Hill. 1938. xi + 423 pp. 24s.
A First Course in Statistics : their Use and Interpretation in Education and Psychology. By E. F. LINDQUIST. Boston, Mass.: Houghton Mifflin. 1938. xi + 226 pp. 8s. 6d.
Study Manual for a First Course in Statistics. By E. F. LINDQUIST. Boston, Mass.: Houghton Mifflin. 1938. 120 pp. 5s.

All these text-books of statistical methods are by American authors. It follows that the illustrative examples which they contain are drawn from American sources, and the English student will need to supplement them by separate study of English published statistics.

F. C. Mills' *Statistical Methods Applied to Economics and Business* is an old friend of many English students of the subject and is now published in England. The English edition appears to have been printed from the original type and to be, except for the title page, identical with the American edition of 1924. It is an excellent text-book for those who are capable of following well-expressed but sustained arguments involving simple algebra and illustrated by numerical examples ; the calculus is not mentioned. Correlation, including non-rectilinear, multiple and partial correlation, is treated in some detail. The mathematical bases of the methods are not given, but the careful reader will become aware of the principal dangers in their use by non-mathematicians. It must be added that this is a textbook of the less advanced statistical methods commonly used in economics and business and *not* of the details of their applications in those fields. The reader will find, for example, little about *Konjunktur* and no more than a mention of management control through statistics.

Introduction to Economic Statistics by Crum, Patton and Tebbutt is similarly a text-book of statistical methods commonly used by economists, and not a treatise on economic statistics. It is a complete revision of Crum and Patton's *Economic Statistics* which was published in 1925. It contains what Mills' book lacks—a discussion of the nature of simple statistical data, their compilation, tabulation and use. In other respects it covers much the same ground, but is less satisfactory than Mills': less trouble has been taken to make the exposition clear and exhaustive and there is more dependence on algebra. In the treatment of time series, there is no mention of moving averages; no method of measuring seasonal fluctuation is described except Persons' link-relative method; and insufficient emphasis is laid on the dangers of correlating time-series.

---

[1] *Cf.* Annual Report of the U.S. Secretary of Agriculture, 1938, p. 25.

In *A First Course in Statistics* E. F. Lindquist attempts a new method of teaching statistics. His expressed aim is to stress as much as possible the uses and interpretation of statistics while eliminating as much as possible the mathematical theory of statistics, the mechanics of computation, and the number of techniques considered. His treatment is based upon the Socratic method and "is designed particularly to develop in the student a critical attitude toward the use of statistical methods in education and psychology". Actually the methods discussed go as far as correlation, and the exposition is well sprinkled with mathematical symbols and equations. It may be assumed that this book is an attempt to correct that blind faith in statistical hocus-pocus which is characteristic of some of the less scientifically-minded students of psychology and education; in other words, to show them the limitations of the formulæ which they have learned to apply in a routine manner but have never understood. As such it is a useful text-book—for those students. The *Study Manual*, intended to supplement the text-book with practical exercises, consists of nearly 300 questions with spaces for the answers; but there is no key.

Frederick Brown.

Indian Currency Problems in the Last Decade (1926–1936). By J. C. Sinha. Madras Law Journal Press. 1938. vii + 166 pp. Price not stated.

Mr. Sinha, after a short historical introduction, undertakes a careful analysis of "the problem of the rupee" between 1926 and 1936. His method is to describe the course of events and of Governmental policy, to assemble and analyse all the relevant statistical data, and then—in the light of this evidence—to submit to careful criticism both the policy pursued and the arguments advanced for and against that policy. His enquiry throws considerable new light on this highly controversial subject, as he casts his net wide, and is not content simply to re-examine data already discussed, often *ad nauseam*, by previous writers. This is particularly noticeable in his discussion of the much debated "one and sixpenny rupee" problem. The

Hilton Young Commission, for instance, in maintaining that, in 1926, adjustment to 1s. 6d. had been secured, contented itself with showing a high degree of correspondence between Indian and world prices in terms of gold. Mr. Sinha rightly argues that this is not enough, and adopts the further criteria: (*a*) whether or not gold movements were maintained on the same scale; and (*b*) whether or not there was parity (in the sense of a similar trend) between internal and external short-term interest rates during the period under review. His analysis leads to the conclusion that adjustment took place between April, 1926, and March, 1927, and was approximately maintained between April, 1927, and March, 1929—after which signs of instability recurred. From this it can be concluded that, even if adjustment was obtained at the cost of deflation, the process did secure the desired result, and hence that by April, 1927, opposition to the 1s. 6d. rupee on the score of "lack of adjustment" was no longer justified.

Mr. Sinha shows commendable independence of thought in his criticisms of the arguments advanced by both sides in this and other controversies. He concludes that, with regard to the 1s. 6d. rupee, neither party proved its case, and in other connections, even when he agrees with the conclusions of one or other protagonist, he demonstrates the inadequacy of the supporting arguments.

It is impossible, in a short review, to reproduce Mr. Sinha's arguments, but his main conclusions may be shortly summarised as follows. (1) The chief defect of the recommendations of the Hilton Young Commission was not the choice of 1s. 6d. but the decision to stabilise at an inappropriate moment. (2) In 1931 the changed conditions had removed the valid objections of 1920 and 1926 to linking the rupee with sterling. Adherence to the gold standard was impracticable and a "free currency" too dangerous. Linkage with sterling provided the advantage of "regulated inflation along with sterling". (3) Linkage with sterling resulted in the export of gold from India, but this was beneficial because profitable. India's gold export was thus "an effect of depression but a measure for trade revival". Here, surely, he fails to make the most of his own argument. It might have been added that those who objected to the gold exports advocated a return to 1s. 4d.—a measure which would in fact have added an extra stimulus to the export of gold. (4) India's currency objective should be exchange stability. As a debtor India cannot afford to sacrifice external stability for the sake of "internal stability", which in any case is difficult to interpret and might easily prove to be a will-o'-the-wisp. (5) The currency and financial policy pursued has tended to be not so much "interested" or perverse as unduly cautious. "It should not be impossible," he says, "to provide more employment and additional purchasing power in the hands of consumers without unduly affecting the price level and the exchange rate." It might have been added that a measure of depreciation resulting from the adoption of a reflationary policy might not be open to the same objections as a decision to depreciate in order to inflate.

In conclusion it may be said that it is refreshing to find a non-dogmatic writer on these highly controversial subjects. Mr. Sinha considers the indirect and long-run as well as the direct and short-run results of the policy pursued, and his analysis certainly helps to present the whole problem in its proper proportions.

VERA ANSTEY.

Personal Income Taxation. By HENRY C. SIMONS. University of Chicago Press. 1938. xi + 238 pp. $2.00.

Economics has to do with the demonstrability of reality: its abstractions relate to the concrete. Moral philosophy, on the other hand, is not a system of demonstration. Evaluating the ideals expressed in attitudes to life, its province is the human imagination, and can never pretend to be dealing with anything demonstrable as matter of fact. Consequently, the classification moral science, under which economics has always been subsumed, embodies something of a paradox. Its use is bound to raise questions as to the relation between the ideals of men and the matters of fact with which science claims to deal. Its use, so far as economics itself is concerned, may, for example, induce the notion that there exists some discoverable connection between economic theory and economic policy which can be talked about in a perfectly logical and atemporal manner. These and similar confusions have waxed in recent years, and they have had their inevitable effect on methodology and critique. Questions such as that as to the sort of standard to which fundamental propositions should be referred are controverted with renewed energy. There is doubt as to whether the formalities of theory merit the serious attention of those who seek the wisdom beyond the knowledge.

The tendency of contemporary economic thought is to bring into the foreground two ideas, neither of them new. The one is that the boundary between political economy and economic theory is not sufficiently clearly defined; we seek anew the right relation between moral considerations and the analysis of physically real things. The other is the importance of having a clear sense of the fact that similar terms refer to different things and fulfil different functions according to whether they are used as aids to explanation or as expressive of the aims of public policy.

Economists can say a very great deal that is instructive and useful on many of the financial problems, the tentative joint solution of which is fiscal policy. But most of their saying must be done in a cosmopolitan atmosphere; their diction appertains more to the vernacular than to the classic. If taxation is a method of redistributing wealth, there is no discussion of policy which can attain to the same plane of abstraction as ordinary analysis. Each essay will result not in general but in particular conclusions. The question of the right use of terms is secondary and dependent. It is not so much a terminological dispute which disturbs our peace, but the difficulty of recognising one another's purposes. If we are more careful now in defining our attitudes, the self-consciousness of the age has driven us to be more punctilious about attitudes than formerly.

Professor Simons has responded to these influences, and his book, which " combines strangely the characteristics of an academic treatise and a tract for the times ", bears the marks of having been composed by the light of these ideas. Though it adds very little to the body of critical literature which has yet to be built round them in a fully convincing manner, it quickens a sense of their significance. If the conduct of a policy is to be criticised—a policy which can only be translated into action by making use of the language of common life—then criticism must be in terms of that life. But the success of a policy may depend too on the degree of precision it is possible to give to current notions. If we can add to that kind of knowledge which, as Emerson says, is good for this trip only, we may be wise in our generation without ever troubling to grope about for the real truth of the matter. This is the kind of approach with which Professor Simons is more nearly concerned. The choice of a basis of taxation is becoming an increasingly important question for modern fiscal policy. The prominence of the income tax as an instrument of general social policy, and the ever changing temper of social morals renders that question major and continuous.

The author's introductory essay is mainly occupied with the place of justice in taxation, both as a matter of doctrinal history and as one of personal preconception, and its relevance to the development of a general case for the extension of the direct personal tax based on income. A grasp of contemporary judgment on the subject of equality is a cornerstone which will bear all the weight of the argument. There is no need to question the validity of that judgment. Nor is there need to appeal to the sort of calculus bred of philosophic radicalism which has given us the various sacrifice theories. The theoretical possibilities of that calculus no longer excite us. Similarly, we do not need to deduce progression from any general form of utility function any more than we need to prove the case against inequality itself. If taxation always affects the distribution of income, the question as to what effects are desirable is not an economic problem. Nevertheless the task of weighing the desirable effects of a progressive tax on distribution against the corresponding undesirable effects on production, the latter being, as it were, costs of the former, evidently involves the reason of choice. The expansion of this theme, especially in connection with the effect of income tax on savings and investment, would have helped to correct the disproportion between the attention given to productional and distributional considerations which, despite the author's warning, one cannot but feel unbalances the book somewhat.

The chosen definition of income sweeps widely:

> "The algebraic sum of the individual's consumption and the change in the value of his property rights during a period."

To its development the remainder of the book is devoted. Within the limits imposed, and at the level he chooses to treat his themes, the author is competent and interesting. If we are more concerned with contours than the nature of the surface, if the interlocked problems of administration and equity are not disengaged as carefully as they might be, the implications of this definition, its relations to others and the objections which might be expected to occur to a keenly critical mind are all displayed and frankly scrutinised. Perhaps for readers of the tract the parts of the book concerned with Capital Gains and Undistributed Profits will be especially attractive, while for the readers of the treatise these same chapters will repay study; they serve to combine many of the elements which go to the making of the whole theory of income taxation, and their significance transcends American conditions. Perhaps men fear the unknown in fiscal matters as much as in most other things, and Professor Simons' conclusions and recommendations will no doubt gain some favour by reason of their conservative aspect and traditional non-revolutionary character. In this respect they have the advantage of the proposals of Professor Fisher, whose case for the exemption of savings from income taxation might have received more direct attention in this work.

Finally, Professor Simons does not ignore the relation of fiscal reforms to the maintenance of political democracy and individual economic freedom, but his canvas is not large enough to admit of its adequate treatment. His personal sympathies cast a shadow here and there, however. One may agree with him when he says there is no issue as to the need for reduction of inequality in wealth and incomes. But one wonders whether we do need that. Does not the father of science give voice to our real desires when he bids us attend not to the equalisation of possessions but rather to the equalisation of wants?

A. L. Green.

Capital Consumption and Adjustment. By Solomon Fabricant. New York. National Bureau of Economic Research. Macmillan & Co. xx + 271 pp. 12s.

This volume forms part of the series of studies of capital formation and national income carried out under the auspices of the National Bureau. Dr. Kuznets' figures of net capital formation published in the volume on National Income and Capital Formation were derived partly from the statistics of capital consumption presented in the volume under review. Mr. Fabricant's work is an attempt to measure the amount of gross national product required to maintain capital intact. The estimates are, however, limited to " tangible goods " coming within the classification " fixed capital " over the period 1919 to 1935.

The main source, though many others are also used, consists of the annual Statistics of Income prepared by the Bureau of Inland Revenue. These figures are very much more detailed than the corresponding ones in this country. The Commissioners of Inland Revenue for Great Britain publish, each year, the total of repairs to land and houses—the statutory reliefs presumably—and the total of wear and tear allowed against plant and machinery. In this country the method of calculation and the rates of wear and tear allowed for income tax are, for all practical purposes, standardised and quite independent of the amounts charged in the accounts. In America, however, tax regulations do not lay down any one basis of calculation and " any reasonably consistent plan " is accepted. In interpreting the Inland Revenue figures the author was fortunate in being able to refer to information collected by the Securities and Exchange Commission. This information suggests that the straight line method of calculating depreciation is more widely used than any other, which may help to explain the stability disclosed by the depreciation figures set out by Mr. Fabricant. Information from the same source suggests that the majority of companies included in their accounts the same amount of depreciation as was allowed for tax purposes and that the exceptions to some extent balance one another. However, it does not necessarily follow from this identity that the depreciation figures are a *significant* measure of capital depletion. The use of accounting data, particularly when modified for income tax purposes, requires great caution and is beset with considerable difficulties, particularly when there is a change in law or practice. The author, however, recognises these limitations and is at some pains to emphasise them. He might nevertheless have examined in greater detail the effects of aggregating admittedly arbitrary accounting figures. Do they become more or less significant when added together ?

In the discussion of concepts with which the volume commences, a distinction is drawn between capital consumption, defined as " the current value of durable goods used up in production " and capital adjustments arising in other ways including the revaluations of existing durable goods. " Normal obsolescence " is treated as capital consumption. The objective underlying this distinction is the segregation of " that part of capital change which may reasonably be charged against current income ", thus excluding changes which, it is alleged, would " distort the measure of current income ". Mr. Fabricant, while aware that all economists would not agree with the notion of income implicit in this view, believes that the majority would support it. It is, however, unnecessary to question here Mr. Fabricant's point of view, since the *analysis* of capital formation and of the forces resulting in income is likely to be valuable and the critic can add together items which he thinks ought not to be separated.

Having stated his concepts, the author examines the ways in which capital consumption is measured in practice, including depreciation and depletion charges, provisions for accidental loss and maintenance and repairs. The study covers not only industrial capital, but also agricultural, Governmental and consumers' capital, though in the case of the last three the available sources permit only a very incomplete picture. So far as industrial capital is concerned the author grosses up the information available for corporations to cover unincorporated enterprise on the basis of comparative value of product. One very important form of consumer capital has been excluded—namely, household furniture—apparently because there are no satisfactory sources. Something might, however, have been done with insured values if these are obtainable from insurance companies.

Perhaps the most interesting part of the study is the attempt to modify the existing data in order to bring them into line with the definitions adopted by the author. One of the most important of the adjustments is the attempt to turn the depreciation figures into " current values " for which purpose the author has to make some rather heroic assumptions. The adjustments are necessary because, in the main, depreciation charges consist of writing off original cost, though there are many complications. It follows that the values underlying the depreciation charges are not values of the current year. When these adjustments are made there is a considerable change in the shape of the curves.

In criticism, it should be pointed out that one or two of the assumptions appear to be lightly made, though this may be due merely to the absence of explanation. For example, when discussing the base used in calculating depreciation charges the author assumes that " book-value " means " cost ", for which there seems to be insufficient evidence. Another criticism is that the author does not adequately summarise and shew the significance of the conclusions which can be drawn from his study. This is a pity since all sorts of interesting results are to be found in the book which will certainly repay study even if only to emphasise the lack of comparable sources in this country.

RONALD S. EDWARDS.

The Indian Monetary Policy. By B. P. ADARKAR. Allahabad: Kitabistan. 1939. xiii + 112 pp. 2s. 6d.

The armoury of argument for lowering the rupee ratio has in recent years been reinforced by new weapons drawn from world experience. Devaluation has evolved from a shady expedient into a respectable and even virtuous policy. Professor Adarkar believes that what is sauce for the sterling goose should also be sauce for the rupee gander; and in this trenchant polemic he states his case with all modern improvements.

To the maintenance of too high an exchange value for the rupee is attributed the decline of prosperity in India since 1923, the loss of gold and sterling assets, and the budgetary difficulties of the provinces. For these problems the remedy recommended is accordingly either devaluation or "de-linking" of the rupee, i.e., allowing it to find its own level in relation to sterling.

Whether the latter course is altogether justifiable is somewhat questionable. In his anxiety to escape from the trammels of outworn orthodoxy Professor Adarkar plumps for free currencies with perhaps too undiscriminating an enthusiasm. Moreover, anxiety to make a case for a lowered ratio tempts him to over-statement, as when he claims that exports will both rise in price to the Indian seller (p. 89) and increase in volume by becoming cheaper to the foreign buyer (p. 94). In point of fact the experience of other primary-producing countries raises the question whether either result can be greatly relied upon. But in any case it is clear that the two cannot *both* occur to the degree which devaluation would theoretically make possible.

Nevertheless there is sufficient similarity between the position of India and, say, Australia to justify serious consideration of Professor Adarkar's arguments. It is unfortunate that the Government communiqué quoted by him on pp. 100–102 suggests that, whether such consideration has been given or not, it is not thought necessary to provide any adequate argument in reply.

J. K. Horsefield.

La Théorie Quantitative de la Monnaie. By Paul Lambert. Paris: Librairie du Recueil Sirey. 1938. 271 pp.

The unquiet ghost of the Quantity Theory of Money, though largely vanished to-day from monetary literature, continues to haunt that of France. Dr. Lambert here makes an attempt—claimed by himself to be the first comprehensive one and certainly very up-to-date—to rationalise the phenomenon and give it final rest.

His method is that of logical dissection. A historical introduction, tracing the development of the theory from Copernicus to J. S. Mill, prefaces a more intensive examination of the work of Fisher, Keynes, Hawtrey and Cassel, and leads to the conclusion that it is impossible to formulate any single "Quantity Theory" which is compatible with all these different views, or which yields any positive guidance. Four "quantitative principles" are therefore substituted, underlying all the types of theory: viz., (1) the equation of exchange, including the cash-balance formulation; (2) the law of proportionality (between money and prices); (3) the passivity of the general level of prices; (4) the "quantitative notion", viz., that *MV* exerts an important, but not exclusive, action on prices.

The greater part of the book is devoted to marshalling against these principles the familiar arguments from theory and experience and, having eliminated the first three, Dr. Lambert arrives at a reinforced version of the fourth, viz.: that *M* and *V* must be reckoned amongst the more important influences on the price-level. Since this conclusion will be more generally accepted to-day than the argument perhaps implies, the most useful feature of the book is its clarification of the minutiæ of past controversies. Here the analysis is both systematic and thorough.

Unfortunately, in applying his deductions to his psychical research, the author handicaps himself seriously by denying that supply and demand can explain the value of money. His attempt to lay the ghost is therefore reduced, in effect, to showing that one need not look at it. So persistent a spectre needs a more scientific exorcism, and this is surely now available in the work of Professor Hicks. Had Dr. Lambert been familiar with *A Suggestion for Simplifying the Theory of Money* he would have found there the incantation which he sought.

J. K. Horsefield.

Silver Money. By Dickson H. Leavens. Bloomington, Indiana: Principia Press, Inc. 1939. xix + 439 pp. $4.00.

This monograph, No. 4 of those issued by the Cowles Commission for Research in Economics, is a valuable and compendious account of the vicissitudes of silver during the past 150 years. Mr. Leavens has lived long in China and knows his subject thoroughly; he has a dexterous pen and the numerous tables and charts are models of clarity. His book should become, and probably long remain, a standard work of reference on the subject.

The early chapters discuss the progress of bimetallism in Europe and the United States and include a lucid account of the various International Conferences during the last quarter of the nineteenth century. Thereafter attention is naturally concentrated chiefly on the United States, China and India. The complicated monetary problems and policies of each area are fully explained and the position of silver in regard to each is discussed in detail. Especial attention is given to elucidating the repercussions of the war-time rise in the price of silver and of its subsequent collapse. Later chapters describe the effects of the Pittman Act and of the U.S. Silver Purchase Act of 1934, down to the spring of 1939.

Mr. Leavens evidently considers that the silver producers whose insistence procured these measures have thereby overreached themselves. He believes that the high price of silver has permanently destroyed the demand for it for monetary purposes, and points out that it must also prevent any extensive industrial use for the metal. But his presentation of his case is admirably balanced and good-humoured, and the reader is left to form his own conclusions from the data and documentation submitted.

The main text is followed by a series of 16 appendices. Some of these elaborate the statistics and include useful tables showing, for example, the distribution of the world's gold and silver in 1933, and the pre-war and post-war coinage ratios and bullion parities of the silver coins of all important countries. The last ten appendices reproduce the text of significant documents on the silver question, such as the Thomas Amendment to the A.A.A., the London Silver Agreement of July, 1933, and various Messages and Proclamations by President Roosevelt. Finally there is a Selected Bibliography running to 25 large pages, and two indexes.

All those interested in monetary questions will welcome this admirable résumé of one of the major practical controversies of our civilised life.

J. K. HORSEFIELD.

Tanker Freight Rates and Tankship Building: An Analysis of Cyclical Fluctuations. By DR. T. KOOPMANS. Netherlands Economic Institute. No. 27. De Erven F. Bohn, N.U., Haarlem. P. S. King & Son, Ltd., London. 1939. xii + 222 pp. Fl. 2.

The purpose of Dr. Koopmans' book is to analyse the forces governing freight rates in the market for tankers. He begins by describing the market. The demand comes principally from oil companies, both large and small, though the large companies cover a good deal of their requirements, but not all, in their own ships. On the supply side, roughly 40 per cent. of the tonnage of tankers of over 4,000 tons is owned by shipowners not engaged in the production or sale of oil, the remainder being in the hands of oil companies and governments. The author believes that (at least until the formation of the Pool in 1934) the market has been highly competitive, and therefore proceeds on the basis of the usual supply and demand analysis employed in dealing with perfect markets.

His method is to discover from available statistics the elasticities of demand and supply. General considerations, backed by correlating freight rates with other relevant statistics, lead to the conclusion that the short run elasticity of demand is extremely low, at most 0.3. The supply curve we should expect to be highly elastic at a rate of freight corresponding more or less to prime costs, and highly inelastic in its upper ranges, since the supply of tonnage at any moment is limited. This is confirmed by analysis of the statistics. What the author does in brief, after a series of ingenious calculations, is to draw a scatter diagram relating not the supply of tonnage but the extent to which existing capacity (measured as the number of ton-miles that existing ships could do in a given period) is utilised, to an index showing the percentage which the average rate of freight in that period bears to prime costs in the same period. In this way most of the forces tending to shift the supply curve—expansion of the fleet, changes in costs, etc.—are eliminated, and it becomes possible to draw a fairly continuous curve. The figures used are for 1922–1930, and give the elasticity of supply in the upper part of the curve as about 0.15. Comparison of monthly statistics of Norwegian tankers laid up in the years 1931–36 with freight rates in those depressed years confirms the view that in its lower half the curve is almost infinitely elastic. It is to the peculiar shape of the supply curve and the low elasticity of demand that the violent fluctuations in rates are due.

In the long run the expansion of the tanker fleet has to be taken into account. Statistics of freight rates and new tankers delivered over a period show that the peaks in the latter follow just about one year after the peaks in the former. This leads Dr. Koopmans to associate himself with Tinbergen's earlier work on Dutch shipping in the argument that there is a regular shipping cycle, due to the lag of one year between the ordering and delivery of new tankers. If for any reason demand exceeds supply, rates shoot up to very high levels ; shipowners then order new ships extensively, and these, when delivered a year later, depress rates to a very low level ; rates remain low until the growth of demand and the toll of the sea and old age cause demand once more to exceed supply ; freights rise to a high level, and the cycle begins all over again. It is just as likely as not that shipowners overbuild when freights are high, thus producing a cycle of this type—but this sort of conclusion cannot, of course, be definitely deduced from statistics.

Finally the author examines the effects of the International Tanker Pool. This is a scheme under which shipowners pay a levy for each ton of shipping employed, and receive from the Pool a subsidy for each ton laid up. Theoretically the effect of this should be to raise the minimum freight which shipowners will accept by a sum equal to the amount of the levy if the ship is employed plus the amount of the subsidy if it is laid up. But the statistics show that the minimum freight has risen by less than this amount ; apparently shipowners prefer to employ their ships so long as prime costs and the levy are covered, rather than keep them idle to earn the subsidy.

The other effect of the Pool has been, by raising average earnings in the tanker trade, to increase shipbuilding, so that the curve of ships delivered no longer lags a year behind the curve of freights. This increase in capacity has worried the committee responsible for working the scheme, as it worries all who seek to raise prices without restricting output, but doubtless the outbreak of war will for a while postpone their troubles.

W. ARTHUR LEWIS.

Report of the Committee on Prices in the Bituminous Coal Industry. National Bureau of Economic Research. 1938. 144 pp. $1.25.

This is a somewhat unusual book. It consists of the report of a Committee on Prices in the Bituminous Coal Industry, for an organisation whose object is to encourage research into costs and prices and on which Universities, government departments and professional bodies are represented. The aim of this report is to set out the economic problems of the industry and questions on which research is needed. It also indicates the available data.

The first part of the report contains an interesting account of the main features of the industry. Some of the arguments used, however, are not very convincing. It is suggested, for example, that the existence of fixed charges lowers prices because they have to be met whether production goes on or not. At the same time it is argued that if bankruptcy supervenes and these fixed charges are reduced, this will lower prices still more since it results in a fall in costs! In the second part of the book will be found suggested pieces of research with an account of the data which seems available for use. The projects which are outlined are of extreme interest and it is much to be hoped that at least some of them will be carried out. The Committee are to be congratulated on their report.

R. H. COASE.

Monopoly and Competition in the English Coal Trade 1550–1850. By PAUL M. SWEEZY. *Harvard Economics Studies* 63. Harvard University Press. Oxford University Press. 1938. x + 186 pp. $2.50. 10s. 6d.

This book is in the main an account of the parts played by the Company of Hostmen and later by the Vend in regulating the English coal trade. Mr. Sweezy commences his tale in the late sixteenth century and ends with the collapse of the Vend in the 1840's following the opening up of new coalfields by the railways. He has therefore nothing to say of the period in which the coal industry was primarily competitive and concerns himself with the period in which monopolistic forces predominated.

Mr. Sweezy informs us in his Preface that he owes his interest in problems of economic development to a study of Marx. Marx, however, does not again appear until the concluding section is reached. There he is quoted as saying that " large capitals beat the smaller " since the cheapness of commodities depends on the scale of production. It is, of course, true that Marx's statements require interpretation, but it does not seem a very illuminating remark to apply to the British coal industry. Mr. Sweezy himself says that " It had often been predicted that a prolonged open trade would result in the complete extinction of the small and inferior collieries with a consequent monopolization of the market by a few large producers of best coal. It was pointed out as early as 1846 . . . that there was no justification for this argument, either in theory or in experience. It assumed a non-existent correlation between size of colliery and cost of production; . . ." He goes on to quote another writer who in 1848 said, "As to the crotchet 'that the great collieries will drive the small collieries out of the market', experience shows that the impression has no foundation." To justify a similar attitude to-day, one has only to refer to the works of Professor Dron.

There is much of great interest in Mr. Sweezy's book; the theoretical sections, however, I found very disappointing. His theoretical model to explain the breakdown of the Vend is too simple to be satisfying; his remarks on industrial combination are not likely to enlighten anyone who is acquainted with Professor Macgregor's work on the subject. Throughout, Mr. Sweezy's theoretical sections seem to be only loosely connected with his factual material and in his concluding section he finally manages to sever the link completely. He concludes: "A new world war, which it is difficult to imagine the capitalist system will survive, is the only conclusion to which one can logically look forward." It is a magnificent *tour de force* to prove the inevitability of a world war by a study of the early history of the English coal trade. In the face of such boldness, one is almost ashamed to be unconvinced.

R. H. Coase.

Books Received

Ashton, T. S.: *An Eighteenth-Century Industrialist, Peter Stubbs, of Warrington 1756–1806.* Manchester University Press. 1939. x, 156 pp. 8s. 6d.

Bingham, A. F.: *Man's Estate, Adventures in Economic Discovery.* George Allen & Unwin, Ltd. 1939. 480 pp. 12s. 6d.

Black, D.: *The Incidence of Income Taxes.* Macmillan & Co., Ltd. 1939. xxi, 316 pp. 12s. 6d.

Bouvier-Ajam, M.: *Frédéric List.* Librairie du Recueil Sirey, Paris. 1939. xvi, 355 pp.

Carlson, S.: *A Study of the Pure Theory of Production.* Stockholm. P. S. King & Son, Ltd. 1939. 128 pp.

Catherwood, B. F.: *Basic Theories of Distribution.* P. S. King & Son, Ltd. 1939. ix, 259 pp. 12s.

Cowles Commission for Research in Economics: *Report of Fifth Annual Research Conference on Economics and Statistics held at Colorado Springs. July 3 to 28, 1939.* The University of Chicago. 1939. 93 pp.

Cripps, Sir S.: *Democracy Up-to-Date.* George Allen & Unwin, Ltd. 1939. 108 pp. 2s.

Croxton, F. E., and Cowden, D. J.: *Applied General Statistics.* Prentice-Hall, Inc., New York. 1939. xviii, 944, xiii pp. $4.00.

Day, J. P.: *World Economic History.* Macmillan & Co., Ltd. 1939. xi, 161 pp. 3s. 6d.

Dearle, N. B.: *Economics.* Longmans, Green & Co. 1939. x, 522 pp. 7s. 6d.

Franck, L. R.: *Les Etapes de L'Economie Fasciste Italienne.* La Librairie Sociale et Economique. 1939. 281 pp. Fr. 30.

Ganguli, B.: *Whither Rupee?* S. Chand & Co., Delhi. 1939. vii, 165 pp. Rs. 3.

Gannett, F. E., and Catherwood, B. F. (Ed.): *Industrial and Labour Relations in Great Britain.* P. S. King & Son, Ltd. 1939. x, 364 pp. 12s. 6d.

Germansky, R.: *Individuum und Gemeinschaft.* Buchhandlung Ludwig Mayer, Jerusalem. 1939. 40 pp.

Gilbert (J. C.): *A History of Investment Trusts in Dundee 1873–1938.* P. S. King & Son, Ltd. 1939. 144 pp. 6s.

Grether, E. T.: *Price Control Under Fair Trade Legislation.* Oxford University Press. 1939. x, 517 pp. $5.00.

Hatry, C. C.: *Light Out of Darkness.* Rich & Cowan, Ltd. 1939. xviii, 238 pp. 8s. 6d.

Hayek, F. A. v.: *Profits, Interest and Investment.* George Routledge & Sons, Ltd. 1939. viii, 266 pp. 6s.

Hempel, E. H.: *Industrial Political Economy, The Fundamentals.* Sir Isaac Pitman & Sons, Ltd. 1939. xi, 454 pp. 12s. 6d.

Hentze, M.: *Pre-Fascist Italy.* George Allen & Unwin, Ltd. 1939. 400 pp. 16s.

Hope-Jones, A.: *Income Tax in the Napoleonic Wars.* Cambridge University Press. 1939. x, 145 pp. 7s. 6d.

Huque, M. A.: *The Man Behind the Plough.* The Book Company, Ltd., Calcutta. 1939. Rs. 5.

International Labour Office: *International Survey of Legal Decisions on Labour Law, 1937–38.* li, 296 pp.

Jennings, W. I.: *Parliament.* Cambridge University Press. 1939. xiii, 548 pp. 25s.

Kolhatkar and Kogekar: *An Introduction to Economics.* Dastane Brothers' Home Service, Poona. 1939. iv, 189 pp. Rs. 1/12.

Lambert, P.: *La Théorie Quantitative de la Monnaie.* Librarie du Recueil Sirey, Paris. 1938. 270 pp.

League of Nations: *World Economic Survey. 8th Year, 1938–39.* George Allen & Unwin. 1939. 247 pp. 6s.

Lindahl, E.: *Money and Capital.* Library of Economics, Section II. George Allen & Unwin, Ltd. 1939. 391 pp. 10s. 6d.

Lowe Chuan-Hua: *Japan's Economic Offensive in China.* 1939. 179 pp. 7s. 6d.

Lunau, H.: *Illusions et Réalités dans la Politique Internationale de Paix.* E. de Boccard, Paris. 1939. 177 pp.

Machray, R.: *The Eastern Question Revived.* George Allen & Unwin, Ltd. 1939. 39 pp. 1s.

Mannheim, H.: *The Dilemma of Penal Reform.* George Allen & Unwin, Ltd. 1939. 238 pp. 7s. 6d.

Minoletti, B.: *I Porti Franchi.* Giulio Einaudi, Turin. 1939. 199 pp.

Reddaway, W. B.: *The Economics of a Declining Population.* George Allen & Unwin, Ltd. 1939. 270 pp. 8s. 6d.

Relatorio do Banco do Brasil. Rodrigue & Cia, Rio de Janeiro. 1939.

Richards, A. I.: *Land, Labour and Diet in Northern Rhodesia.* International Institute of African Languages and Culture. Oxford University Press. 1939. xiv, 415 pp. 30s.

Rieger, V.: *Das landwirtschaftliche Genossenschaftswesen in den kroatischen Ländern.* Verlag Rudolph Pfau, Berlin. 1939. 116 pp.

Ripka. H.: *Munich: Before and After.* Victor Gollancz, Ltd. 1939. 523 pp. 15s.

Robinson, H. W.: *The Economics of Buildings.* P. S. King & Son, Ltd. 1939. xii, 162 pp. 10s. 6d.

Rosen, J.: *Das Existenzminimum in Deutschland.* Verlag Oprecht, Zurich. 1939. 90 pp.

Sastry, K. R. R.: *Indian States and Responsible Government.* Allahabad Law Journal Press, Allahabad. 1939. 142 pp. Rs.5. 7s. 6d.

Saunders, S. A.: *Studies in the Economy of the Maritime Provinces.* Macmillan & Co., Ltd. 1939. xii, 266 pp. 8s. 6d.

Tinbergen, J.: *Business Cycles in the United States of America, 1919–1932.* League of Nations, Economic Intelligence Service, Geneva. 1939. 244 pp. 5s. $1.25.

Todd, J. A.: *The Mechanism of Exchange.* Oxford University Press. 1939. ix, 276 pp. 7s. 6d.

Veblen, T.: *Imperial Germany and the Industrial Revolution.* Martin Secker & Warburg, Ltd. 1939. xxi, 343 pp. 12s. 6d.

Wangteh Yu: *The English Cabinet System.* 1939. xvi, 408 pp. 18s.

Wijk, J. v.d.: *Distribution of Incomes and Fortunes.* De Erven F. Bohn N.V., Haarlem. 1939. xv, 290 pp. Fl. 2.50.

Williams, D.: *John Frost.* University of Wales Press Board, Cardiff. 1939. viii, 355 pp. 10s.

Wilson, Sir A.: *More Thoughts and Talks.* Longmans, Green & Co., Ltd. 1939. vii. 300 pp. 7s. 6d.

Winsemius, A.: *Economic Aspects of International Migration.* De Erven F. Bohn N.V., Haarlem. 1939. ix, 155 pp.

Zimmern, A.: *Modern Political Doctrines.* Oxford University Press. 1939. xxxii, 306 pp. 7s. 6d.